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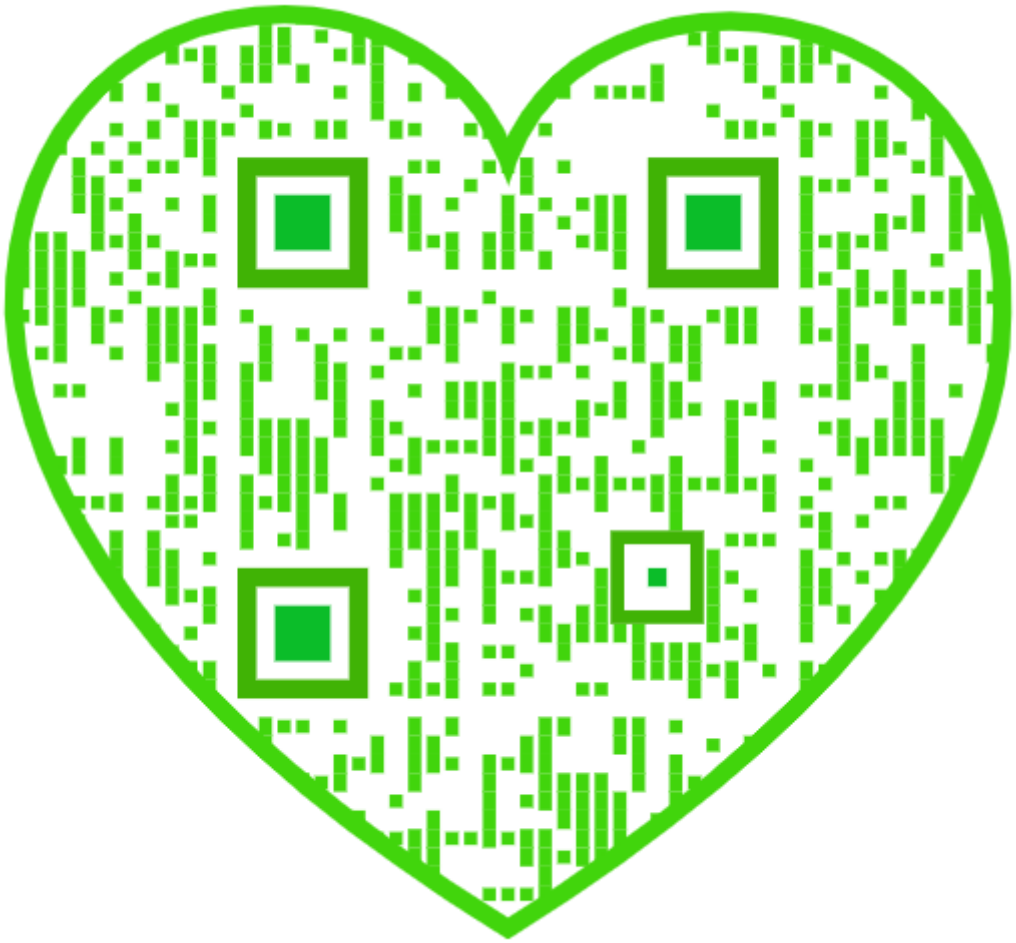

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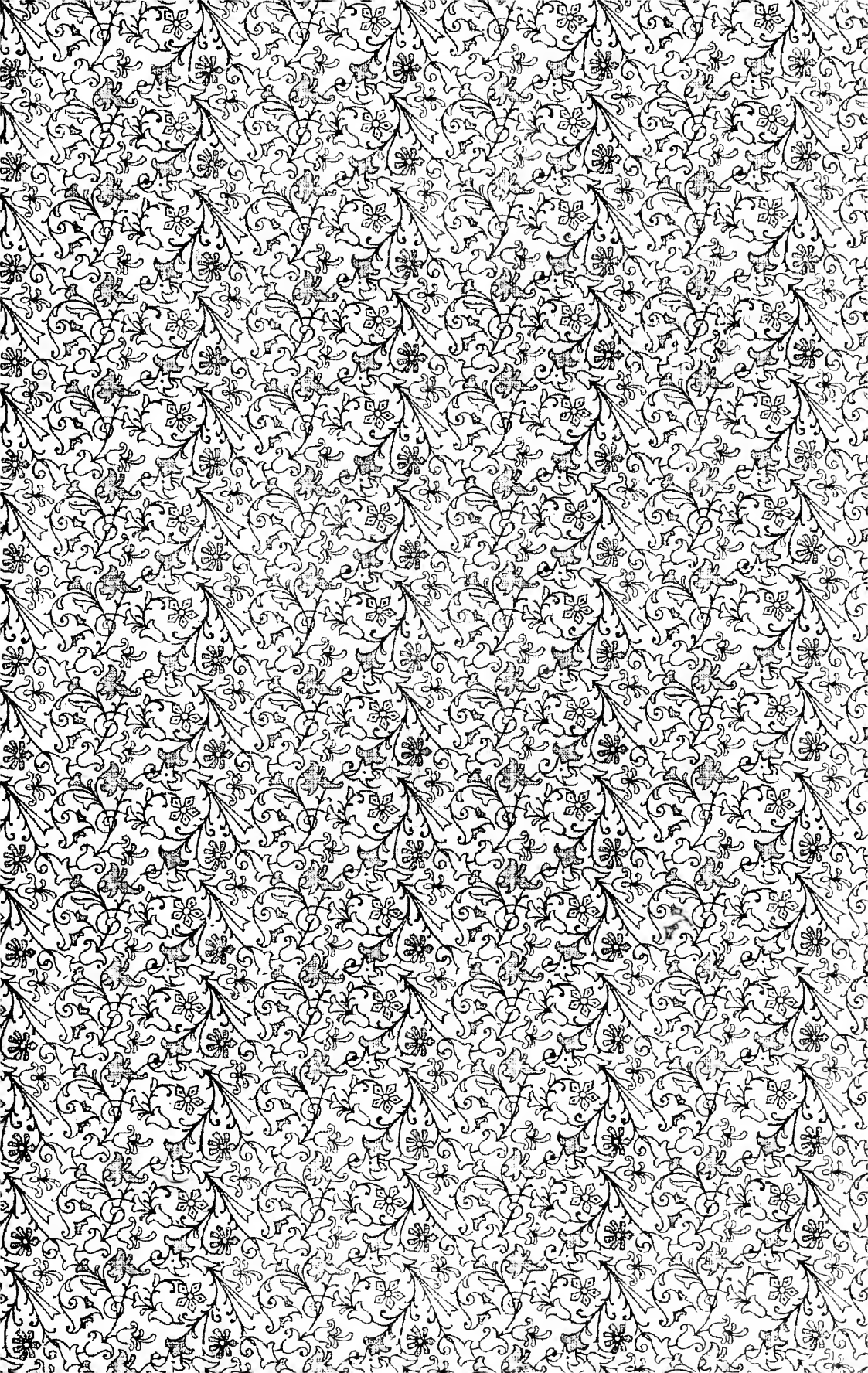

THE

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THE NEW YEAR.

Once more the commencement of the year and a new volume gives us the opportunity of wishing all our readers a Happy and Prosperous New Year, and thanking our many friends for their help and patronage during the one just past. It also gives us great pleasure to acknowledge the many letters we have received expressing appreciation of the JOURNAL. Although the year 1915 has been one of anxiety to all, we can look back upon it with every satisfaction. We most heartily thank our readers for their loyalty and support during its difficulties and trials. Hundreds of bee-keepers have joined the Army or Navy, and it has given us very great pleasure to know that numbers have the JOURNAL sent out to them in the trenches, so that they are able to keep in touch with what is transpiring in the bee-keeping world.

The past season has been only fair. In some instances the yield from fruit, clover, sainfoin, etc., has been good; in others almost a failure, and the heather honey harvest has been one of the worst in recent years. The consequence has been a demand for English honey exceeding the supply, with the natural result of enhanced prices.

So far as novelties in appliances are concerned, the difficulty has been that, when invented, it has been impossible to get them made, as all factories are engaged on work for the Government, and are also short-handed. It is not surprising, therefore, that only three have been chronicled.

The great Reaper is appallingly busy in many fields, and his scythe has also taken its toll from our ranks. Genial "Dick" Brown, so well known as an exhibitor, has passed away; also bluff, hearty "Tom" Walker, a most successful exhibitor in heather honey classes, and well known to Lancashire bee-keepers; cheery "Tom" Gardner, one of the originators of the Northumberland and Durham B.K.A.; Mr. W. Lloyd, one of the most successful of local secretaries, whose smiling face was known for miles round about Lancaster; Major Fair, a most careful bee-keeper, and for several years secretary of the Middlesex B.K.A.; and two well-known members of the Council of the B.B.K.A.—Mr. W. F. Reid, the worthy Vice-Chairman, and Mr. A. G. Pugh—have suffered the loss of their wives. The world is the poorer by the passing of Jean Henri Fabre, the well-known naturalist.

Microsporidiosis—better known as "Isle of Wight" disease—is still with us, and up to the present no method of effecting a permanent cure has been found. The Board of Agriculture are experimenting with a remedy, but this is not being given out until further tests have been made.

A great effort to increase the consumption and sale of honey has been made by bee-keepers during the past year in America, Australia, and New Zealand, and is still being continued. The sale of their honey is being pushed not only in those countries, but also in England, and if our bee-keepers are to hold their own in our home markets they will have to bestir themselves and advertise their wares more. An article that is not continually advertised and kept before the public is soon forgotten. One defect of our want of system in marketing honey is the diversity of prices in different districts. We have no system of grading for either comb or extracted honey. Numbers—we had almost said the majority—of bee-keepers who own from a couple to half-a-dozen hives have no business instinct, and no idea how to put their honey on the market to the best advantage. We thus have the anomaly of sections being retailed in a town shop at 1s. 3d., while at the same time a few miles away a bee-keeper "peddled" equally good sections from door to door at 6d. each. We have also known first-class extracted clover honey sold at 4d. per lb. in bulk. Another direction in which the British bee-keeper loses ground is in foreign trash being palmed off and sold as British honey, and this is done, we are sorry to say, by big firms as well as little ones. Those who do this run the risk of being fined for the practice—no doubt our readers will remember a report in the JOURNAL of one such case, and we have a report of another, which we will publish as soon as possible. We print a copy of a notice issued by the Board of Agriculture, and if any of our readers know of any contravention of these regulations we shall be pleased to help them to bring it to the notice of the proper authorities. After the war all our rural industries will receive a great impetus, and no doubt bee-keeping will become more popular than ever. There is a great work before the Bee-keepers' Associations for which they should even now be preparing. Numbers of men will be unfitted for any but such occupations as poultry and bee-keeping. Many others who, up to the war, spent their lives in shop or office, now they know the benefit and healthiness of fresh air, will respond to the cry of "back to the land." The

poultry societies may be left to look after their side of the business, and bee-keepers' associations must be prepared to look after those who take up bee-keeping—encourage them to start, and keep on, in the right way, and secure their co-operation.

In conclusion, we hope that 1916 will be a better honey season than its predecessor, and that bee-keeping in all its branches will continue to advance and prosper.

BOARD OF AGRICULTURE AND FISHERIES,
WHITEHALL PLACE,
LONDON, S.W.

MERCHANDISE MARKS ACTS, 1887 to 1894.

Regulations of January 2, 1914, as to Official Prosecutions.

SIR,—I am directed by the Board of Agriculture and Fisheries to draw your attention to certain provisions of the Regulations, dated the 2nd January, 1914, which have been made by them, with the concurrence of the Lord Chancellor, under the Merchandise Marks (Prosecutions) Act, 1894, with reference to the prosecution by the Board of offences under the Merchandise Marks Act, 1887, in cases which appear to them to relate to agricultural or horticultural produce and to affect the general interests of the country, or of a section of the community, or of a trade.

The Merchandise Marks Act, 1887, deals with the application of false trade descriptions. The application may be by means of a printed or written description, by label, brand or invoice, and the principal trade descriptions that come within the scope of this Act are "any descrip-"tion, statement, or other indication, "direct or indirect, (*a*) as to the "number, quantity, measure, gauge, or "weight of any goods, or (*b*) as to the "place or country in which any goods "were made or produced, or (*c*) as to the "mode of manufacturing or producing "any goods, or (*d*) as to the material of "which any goods are composed."

The above Regulations authorise the Board to obtain the evidence necessary for proceedings through their own officers or agents, and the Board are prepared so to deal with cases of unfair competition to which agriculturists and traders are subjected at the hands of persons who, in contravention of the Merchandise Marks Act, 1887, apply various false trade descriptions to goods sold by them, more especially descriptions indicating that imported goods to which they are applied have been produced in this country.

I am, however, to point out that it is of great importance that the agriculturists and traders concerned should co-operate with the Board by bringing under their notice cases in which there is reason to suppose that there is a contravention of the Act. Without such information the Board may have no opportunity of taking action under the Regulations.

The Board would be glad, therefore, if you would bring this matter before your members, who will, no doubt, perceive the desirability of reporting to the Board such cases of the character indicated in the preceding paragraphs as may come under their observation.

SYDNEY OLIVIER,
Secretary.

A ROLL OF HONOUR.

Although bee-keeping is considered a minor pursuit, we venture to say that it has provided more fighting men than the usual average of any industry. To place on record the part the members of our craft have played in the present war we propose to make a "Roll of Honour," and shall be pleased if our readers will forward us the **Names** and **Addresses,** together with the **Regiment** and **Rank,** of any bee-keeper serving his King and Country at home or abroad; also if killed or wounded.

We print below a further list of names to those sent in. We shall be pleased to have other names as soon as possible.

Lieut. Burford Norman (Dr. B. Norman), Westbury House, West Street, Havant—15th (Service) Battn. (1st Salford) Lancashire Fusiliers.

Pte. Sidney Sanderson, West Wratting, Cambs.—2/1st Cambridgeshire Regt.

BRITISH BEE-KEEPERS' ASSOCIATION.

The Council of the British Bee-Keepers' Association are anxious to obtain gifts of honey for the wounded soldiers in the London Hospital, where it is urgently needed both for food and medicinal purposes. They will, therefore, be grateful for gifts of same, no matter how small, from bee-keepers throughout the British Islands. It is unnecessary to explain our obligations to these brave fellows, who have sacrificed health and limbs for the sake of our country. Gifts should be sent addressed to the Secretary, B.B.K.A., 23, Bedford Street, Strand. The donors' names will be published in the "B.B.J."

W. HERROD-HEMPSALL,
Secretary.

HONEY FOR THE LONDON HOSPITAL.

Amount received ..... 218½ lbs.

BRITISH BEE-KEEPERS' ASSOCIATION.

There are many subscriptions still outstanding for 1915, and the Secretary would be very grateful to receive these as early as possible, so that he may make up his books. The following, culled from a letter received, is commended, not only to members of the B.B.K.A., but also to those of all County Associations:—"I enclose P.O. for 5s. as my subscription to the B.B.K.A. for 1916. I have a P.O. now, and perhaps I might not have one in January, but I do not want to see the Association go down." This from a man who has lost all his bees in two successive years from "Isle of Wight" disease, and also all his money which he had put by for a "rainy day."—W. HERROD-HEMPSALL, Secretary.

Nutritive Value of Honey (p. 334).—The nutritive value of bread and honey would hardly be 72.5 per cent. unless the amount of honey equalled that of the bread. Presumably the figures given by Dr. Konig are based on weight, and it would indeed be a honey glutton who consumed a pound of honey to a pound of bread. Taking the honey ration as one-fourth, the nutritive value would appear to be 68 per cent. If, however, an equal ration of butter were added, it would make the percentage about 72, or almost exactly that given above. Probably one-sixth of each would be nearer the mark, which with honey alone gives 67 per cent., or with honey and butter, 70 per cent. Thus, the nutritive value of bread, butter, and honey is higher than with the butter omitted, which pleases one greatly, as I invariably take both, in willing obedience to the Scriptural injunction, "Butter and honey *shalt* thou eat!" Of course, the nutritive value of food is not the sole consideration, nor, if we are to believe the psychologists, the most important. Pleasure, or desire, is of great value, and a balanced ration, including some waste, is essential. Regarded thus, it will be seen that bread and butter and honey form a perfect meal.

Our Coloured Thought (p. 336).—Living as I do in a country where barley is grown, I wonder whether Mr. Smallwood is correct in describing it as grey just before harvest. Is it perhaps that there are so many grey things in our purview to-day that unconsciously we sense the drab rather than the gold, the saffron, and the brown? Further on he talks of war, as do most of us stay-at-home folk. We are unable to exclude it from our peaceful notes, no doubt as a result of our unsated desire to bear our part more fully and directly. On the other hand, the bee-keeper in his dug-out or his funk-hole thinks and writes of days with his beloved bees at home.

Angry Bees (p. 338).—Many differences have already been noted between South African bees and our own, but here is a new one. Mr. Martin records that the infuriated insects opened his eyes, but we should expect the bees in this country to close them! Some doubt has been recently cast upon the efficacy of requeening to alter the temper, the suggestion being that the nurse bees can transmit their characteristics to the offspring of the new queen. I am unable to confute this, as for years I have had no vicious bees, but, like Mr. Martin, I here found the quieter strains fully equal as honey gatherers to similarly situated bees of uncertain- or shall I say certain?—temper. The characteristics of a strain should be learnt, and the bees handled accordingly. Cheshire and Simmins record a case of Cyprian bees unmanageable under smoke, and harmless as flies the following day without subjugation.

Wasps v. Bees (p. 346).—A. G. C. asks for a cure for the annual wasp pest and the hive raiding which ensues. Surely it is not so difficult to find. Simply get rid of your useless, unmanageable, and altogether indefensible black bees, and replace them with Italians. The result will exceed your expectation. So far from these perils—I should say these Peris—being robbed out, they will turn upon the attackers, and in a very short time, with their counter-attack, will have reduced the wasps from the offensive to the defensive. After a few days the line of flight may be easily followed to the robbed out nest by the trail of dead Vespidæ, when the nest may be finally destroyed in the usual way. This work should be done at Vesper time, when all the wasps and very few of the attacking bees will be wiped out. The only drawback is that some strains of Italians carry the offence to extremes, and not content with bloodshed, persist in bringing home eggs and young larvæ to be reared as slaves, a practice the thieves have no doubt stolen from *Formica sanguinea*. This results in comb built out on one side only, and attached to their neighbours by columns of wax. Such strains should be weeded out for obvious reasons! Just

why this race of bees should present this advantageous energy is hard to determine, but I suggest with some trepidation that it is due to their own wasp-like character of mind and body. Should your bee-keeping neighbours complain, lead them gently to the ravished vespiaries, and advise them to requeen with your gallant bandits.

The Unprofitable Skep (p. 358).—Here is a similar case to the one given by me, and so mistakenly criticised by Mr. Hamshar. I have no doubt that when this note, or that upon page 407, meets his eye, he will gracefully agree. In this case, there appear to have been three skeps, spring count, from which five swarms were sold, an average of over ten shillings per hive. In addition a quantity of honey was taken, and some driven bees disposed of either for cash or labour, leaving three stocks to stand the winter as before. The surplus bees and honey represent, of course, the gross profit, and should all be reckoned as such. Perhaps Mr. Kettle will favour us with full details.

[NOTE.—The above paragraph was received prior to Mr. Hamshar's reply on page 460 (December 23rd), with which Mr. Crawshaw will no doubt deal in due course.—ED.]

Hives at the Moors (p. 360).—The standard rate of payment to the moorland farmer, in all districts known to me, is sixpence per hive. This may, however, be regarded as a minimum, and it is no doubt often exceeded where special help or consideration is given by the landholder.

Destroying Wasp Nests (p. 368).—Cyanide of potassium is quite effective when properly used, although very large or deep nests may require more severe treatment. The cyanide is best crushed and dissolved in water. A spoonful poured in at the entrance will dispose of all the flying wasps, and if the tunnel leads favourably will destroy the whole nest. If not, a crowbar may be driven through to the nest in the evening, and another spoonful applied—better still, a spoonful of bisulphide of carbon for this second application. The nest may then be choked up, and will not, I think, be heard from again.

Those Yellow Thieves (p. 378).—There are one or two points in "The Rambler's" interesting letter of praise for yellow bees upon which I should like to comment. "*Queens are easily found.*" This is true, the queens do declare themselves more readily than the blacks. If, however, black queens are marked with a spot of light coloured paint on the thorax the advantage is equalled. "*Solid frames of brood.*" This is one of the things I object to. It results, of course, in more honey being stored above, and a bare brood nest in autumn, with the necessity for feeding. I regard labour as the greatest item of expense in the business, and prefer to avoid feeding. I have not fed for years. "*Three to five supers.*" One of these is already accounted for in the honey which should be in the brood nest. If the Italians show more than a superiority of one super, the extra honey has probably been stolen! Reports of Italians storing white honey when none was apparently available are no doubt explained in this way. "*Distribution amongst neighbouring hives.*" I strongly suspect that this is the kind of peaceful penetration with which the Germans have familiarised us, and that the intruders are spies! "*Keenness to take syrup.*" Yes, of course! They'll take anything! But I have already dealt with the feeding question. "*It is the blacks which sting.*" This is only because they are the oldest bees, not yet replaced by yellows. I have had a similar converse experience when requeening with blacks. "*Freedom from wax moth.*" Why then advise the use of creosote on the quilts for the purpose? The taint of creosote is inadvisable in a hive for several good reasons. "*An all-round bee.*" What is an all-round bee? Undoubtedly a bee which will give a substantial return of comb and extracted honey for a succession of years in any part of the British Isles. If this description is a fair one, can it be said to apply to the Italian bee? I think not.

DERBYSHIRE NOTES.

"A NEW EXTRACTOR."

The notes contributed by Mr. Macdonald in the JOURNAL for December 9th mention a new kind of extractor.

I believe that the first mention of this "bilateral-multiple" extractor was made in the French journal *L'Apiculteur* for June and July.

Some months ago I took the trouble of translating the article into English, but have held it back until now, thinking that some more capable translator and critic would come along. I now send it with my comments made at the time. If the Editors are able at some future date to obtain the block illustrating the original article, the readers of the BRITISH BEE JOURNAL will have a better idea of the extractor than words alone can give. Much is claimed for the new machine, but I doubt whether practice would justify entirely all that its inventor says on its behalf.

"After twenty years of apicultural experience my father has just brought out a definite type of extractor capable, not only of emptying at once and the same time the two faces of combs of all the usual types, and that in a manner without reproach, but of extracting at one operation the honey of an entire apiary.

"The machine is composed of a barrel held upon a frame upon the arms of which rest the two extremities of the shaft, one of these extremities being furnished with a geared crank.

"On the shaft in the inside is fixed an arbitrary number of supporting devices, to each one of which four frames can be attached.

"The supporting device consists of arms of equal length having at their ends a stop, and at the hub a movable support which can—

"1. Slide so as to be adapted to suit every kind of frame;

"2. Allow by means of a simple clip displacement the substitution of two half-frames for each frame;

"3. Bend on a spring so as to seize and hold the frame like a big hand, like a large pair of automatic pincers, the grip of which is further increased by the rotation of the machine.

"The mode of operation is as follows:—On lifting the cover, which is a kind of light hood, there is found in the mouth of the opening the arm which is to receive the uncapped frame. Each arm lifted in succession is held during the operation by a convenient brake. As soon as all the arms are fitted with frames (an operation performed in less time than with the older types of cages), the cover is shut and the machine rotated.

"The honey, thrown out in the direction of the slant of the cells with easy rapidity, soon runs along the inner walls, and reaching the bottom of the barrel without remaining there flows out of its own accord without the necessity of inclining the barrel.

"From this short description one can predict what will be the scope of this unexpected invention for the bee-keeping industry.

"The amateur will no longer fear the grievous loss of time formerly demanded for the extraction of his honey.

"The professional will no longer need to fear the risk of robbery caused by an operation which is never finished, nor will he need to encumber himself with a host of extractors, since with one only he will do the work in less time than with many of the ancient ones.

"I give a brief outline of the decisive improvements guaranteed by the new extractor. The duration of the extracting operation is reduced beyond comparison, because the honey of twenty frames can be extracted in less than half the time previously taken for four. No more damaged combs, no pressure, no tendency to break down the thin intervening wall of wax. The brood is safe, because if the honey comes obliquely from the cells to run down the surface of the combs it is because it is liquid, and the larvæ cannot follow the same path.

"The selling price does not lose by comparison, because, put on the market at the same price as the four frame reversible extractor, the new extractor with five supporting devices does in the same time ten times the amount of work. The barrel can stand by the wall, avoiding in this manner the waste of room necessitated by the ordinary extractors, which take up much space in the workrooms, and sometimes cannot be passed through the doors.

"In place of the noise formerly inseparable from extractors we have only a kind of a humming greatly resembling the noise of a swarm.

"This enumeration of advantages so long desired might be much prolonged. Let it suffice me to add that the stability of this new extractor is perfect, both when in movement and at rest. Thus finishes the period when, in spite of fits of temper, we could not stop the dance of the barrel and the infernal racket of the cages and the gear.

"With economy of time, money, space, bees, wax, strength and trouble, what bee-keeper worthy of the name will pass by this indispensable harvester of honey?—René Jacquet."

The bee-keeper may imagine at first, from the outline given above, that with the purchase of this new extractor, all the troubles of extraction will cease. Whether the machine will do the work claimed for it or not I do not know, but at least one criticism may easily be passed upon it.

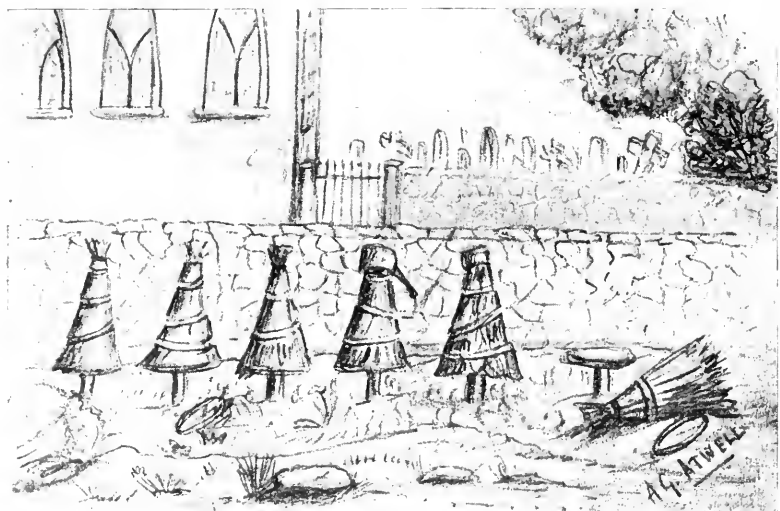
The old style of extractor with which we have become familiarised, whatever be its faults, extracts evenly each side of the comb in turn. The new one above noticed, which claims to extract both sides at once, cannot, from the nature of its construction, extract the honey evenly. From the greater peripheral velocity the honey on the outer edges of the combs would be thrown out before that at the inner edges; thus we should have one part of a comb empty, whilst the nearer we got to the hub the more honey there would be left in the comb, and the greater the speed required to throw it out.—D. Wilson.

WITH THE BEES AT THE FRONT.

By Sergt. A. T. Atwell.

(Continued from page 440, Vol. 43.)

While we were waiting for the bees to get settled and quiet I occupied the time in making an impromptu smoker, which consisted of an empty jam tin stuffed with some old rags. It needed very little smoke to make the bees quiet, as there was plenty of honey exposed which had run from the broken combs. I found that the bees were really of a very quiet nature when properly handled, and it was not long before I had them driven from the skep. The bees themselves were practically the same as our British brown ones, and were typical of the numerous other skeps of bees which I have come across in different parts of the country, although I have at times noticed a slight variation in the colour, due no doubt to the introduction of some foreign blood. The most noticeable feature, however, was their absolute freedom from disease. I have not found during my whole experience here a single case of disease of either foul brood or "Isle of Wight," although I have often found combs, absolutely chocolate in colour, which must have been in use for several years. The sanitary conditions of the country are extremely bad: putrid ponds and open cesspools are very numerous, and during the hot weather the bees undoubtedly visit them at times for their water supply. I have noticed, however, that the French bee-keepers rarely forget to keep a supply of water in shallow pans near the hives. Returning once more to the skep which I had been driving, I found that we had quite a nice lot of honey, which we carried back to our billet and divided amongst the troops. The honey was of medium colour, and had a peculiar although not unpleasant taste and aroma, such as I have never found in English honey. The troops made very short work of it, as it came at a time when our rations were not quite so liberal and varied as they are to-day. Our jam issues then were very small, and there was no tinned butter issued as there is now. The doctor we had with us knew a good thing when he saw it, and used to take some of the honey with all his meals. The troops having once got a taste of the honey, like Oliver Twist were asking for more, and I had no rest until one by one the remaining skeps of that little apiary went the same way as the first. But still I think it was all for the best, because if left alone they would either have been destroyed by shell fire or knocked over and left to die by some of the troops who would have been afraid to actually try to take the honey from them.



SKETCH OF APIARY AT VENDRESSE.

The apiary was situated at the bottom of the garden, with only a wall and a pathway between it and the village church, which then had several shells through it, and by now I expect it is quite demolished, and the site of the little apiary buried in the *débris*. I have often read in the BRITISH BEE JOURNAL of many novel experiences whilst driving bees, but to drive them while under shell fire is something quite new; nevertheless this is actually true, as shells and bullets were whizzing about all the day long. We did not mind the rifle bullets so much,

as, being in a bit of a hollow, these little missiles usually passed too high to do much damage. But the shells dropped anywhere, especially round the church, and many times while in the act of driving I have had to run for shelter when the shelling got a bit too hot. It eventually became so risky to stay anywhere near the church for long that I carried the last two skeps to a cellar and operated on them there, although this place was not shell proof to the "coal boxes" or "Jack Johnsons" as we called them, and which were used very liberally by the Germans during the early stages of the war. It was only a little distance away that one did enter a eave killing a great number of officers and men, practically the whole headquarters staff of a certain regiment. I bottled off two jars of honey and also procured some excellent wax, which I carried about with me for several weeks, intending to try and get them home as souvenirs, but as there was no chance to post parcels home then, and leave at that time was unthought of, I was forced to give the honey to the troops and to throw the wax away. In the vicarage at this village I also came across a huge piece of wax which must have weighed (before a large piece was broken off) some 12 lb. or more. I also found little things lying about which told me that the occupant at one time must have kept a considerable number of bees. Vendresse also holds some very grim recollections, for during our few weeks' stay there we were continually attacked by the Germans, and I lost many old friends and comrades, both officers and men, one sergeant in particular, who lived very near me before the war, and who was always very interested in my bees, and intended starting himself if the war had not broken out. A moonlight night just outside this village after a big attack I shall always remember; we went out searching for wounded, and the strange positions that some of the dead occupied made the scene most weird, and I spoke to a chap who was sitting up holding his rifle, only to find on closer examination that he had been dead some hours, evidently killed instantly in the position he then occupied. I had a very narrow escape one Sunday evening about 5 o'clock. I had to go round to a big château to fetch the medical officer, who was attending a small church service in the cellars there. I was just preparing to leave the place when a huge "Jack Johnson" (weighing some half a ton) came crashing through the stables adjoining the house and landed without bursting on the lawn only a few yards from where I was standing. Had it exploded there would not have been much of me, or the château either, left. As it happened no one was hurt at all, although the shell passed clean through both walls of the stable just over the heads of men and horses.

(To be continued.)

CORRESPONDENCE.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

LOCATION FOR APIARY.

[9217] In reply to your correspondent *re* the above, I wonder if he would care for this part of Yorkshire. We have many miles of moors from which excellent harvests of honey are gathered, and a great many pretty villages situated adjacent to them, nearly all of which have railway stations. As I am secretary to the above association I should be only too pleased to look out for a house for him if he would send me a few particulars as to size required, etc.—L. H. SMALES.

THE BUSINESS OF HONEY PRODUCTION (*p.* 407).

[9218] Without any pretensions as to being able to offer any solution worthy of a "Lloyd George," if allowed, I should like to add a few thoughts to this very up-to-date problem.

It seems especially opportune when we are likely to be looking round for light open-air employment for the maimed and sufferers of the war. When we consider that for several years over £50,000 worth of honey has been imported per annum into the United Kingdom I think we of the Associations, joined together might well take a hand in this national task, and members, although often looked upon as "cranks" in the way Mr. Smallwood means, can, if they will meet and discuss the thing, develop into a very substantial "driving force." That's the point! Are

we going to be in earnest about it? The line must be drawn between pleasure and profit. Although so nearly related, local committees do not seem to catch on; in fact, we can't meet once a year with any degree of strength. I am outside the "British Association" now with reference to meetings. Can we start a branch, offshoot, or sub-committee under the "British," to go especially into this weighty problem? I should like to ask here whether we are right in supposing the "British Association" to be a sort of pivot or central school of thought? If so, we might easily get a lead, and I must say that if it were not for the JOURNAL we should hardly know such an association existed. As regards inter-business, I might easily be accused of running away, but I think we must all lend a hand if we wish to see our industry go a step forward.

Depletion of bees is rather against us at present, and I think that given an overladen production, as might occur through taking up bees more largely for profit, some means would be found to bring producer and consumer together. Good counties might employ a collector. This should not be a large item if found necessary. This congestion, I think, is rare and local, at present at any rate, while if the large firms wish to distribute honey, I say they must buy where they can to advantage.

Packing for extracted honey is rather an expensive item, and is a hindrance alike to large buyers who wish to bottle, and to small producers. A considerable saving might ensue here if we would leave our conservative shells and buy collectively. I might add sell, but districts must control this. I think many pleasant evenings could be spent in discussing these things in the slack times, and there is nothing like talking, to find out the way to do things.

Advertising.—We should all feel the benefit of this. I like the "think imperially" idea here also. There is nothing like similar and simultaneous action to accomplish something. The Surrey Association distributes pamphlets at lecture meetings with various instructional items, but my contention is that these do not reach the "consuming" population to any extent, and perhaps are not intended to, but a good deal of the information is intended for them. Could not a design be adopted generally and supplied at a cheap rate from the central office for the use of associations and private producers alike. The shopkeeper is always glad to recommend some new soap or other article in competition. Why not honey? Such a circular would, I think, be very useful all round, not forgetting such items as granulation. This seems a bugbear sometimes. One person I know threw some granulated honey away as it had "gone bad." And couldn't the JOURNAL stand a little "external puffing" on the same sheet?—A. H. HAMSHAR.

BAD-TEMPERED BEES.

[9219] I thought perhaps a yarn of mine respecting the temper of bees would interest a few readers. Having a lively stock of Blacks that would attack one a good distance away I decided I would requeen them. I introduced a yellow queen, an old one. After a few weeks as I did not see many of the new race, so come what may, I determined to "go through the mill," as the saying is, when the hive was opened. My apiary is not very private, and the August holiday week being a slack time I took the chance to examine them. Upon looking through the combs I at once saw what had happened. The old queen being removed, they had made a queen from one of her eggs after receiving the yellow queen for a few days. The bees in question were terrors. They would double themselves up in their fury, making a high-pitched, vicious sound. I had just shut the hive down when lo! along the path was a person coming, and I could see only too well what would happen. He had been thirsty, and was well "primed," as it had been a hot day. Away went one hand, then the other, then the hat, and finally he ran, I at a distance watching with grave concern. Then the language; well, you know!!? ——!! &c. Having told this person over two months before that the bees live about six weeks in summer, he naturally thought I was at fault. He flew into a fearful rage; fetched his gun, and was going to clear me and the bees out of existence. His face was like a plum, and his nose a lovely tint—he said it was the bees. Things were so threatening that I went as close as I could, anticipating a wrestling match, man *v.* man and gun. "Life's unbearable against them black ———. You said bees only live about six weeks, and a couple of months or more has gone," he exclaimed. I said I was truly sorry, as it was not my wish to have "stingy" stocks, and that I had to "face the music" more than he. However, that stock is now a gentle one. Another stock, a Carniolan and Italian cross, are also "stingy"; two gentle races make a lively cross. Some days, however, they are as harmless as flies. By watching that lot closely I find they are demons for work, and a few of them don't hesitate at flying now in this weather, such as cold, rain, &c. I intend having

three distinct apiaries next season if I can get the usual standing room for a few hives. I also have one hive full of old combs on which bees died of "Isle of Wight" disease last year. The combs smelt sour and were mildewed. I washed or soaked them in water in the early spring, syringed with permanganate of potash, and dried. Not worth the trouble I will admit, but having a spare comb of bees and a queen cell I put another comb of bees to them, making two, and some of the old combs, for experiment. I have, of course, medicated them from time to time, and am watching that stock, which now covers six combs at least, and promises to be a good stock next spring. That should be a good test, and, personally, I think stocks are not long in showing signs of "Isle of Wight" disease, as surely it does not take several generations of bees to work up the infection. It may be that the queen is getting past her best. The bees are not so vigorous, therefore they easily get the disease. That is my humble opinion and experience. — ARTHUR TROWSE.

Notices to Correspondents

Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. All questions must be accompanied by the sender's name and address, not necessarily for publication, but as a guarantee of good faith. There is no fee for answering questions.

E. LINTER (Bournemouth).—The queen from Dutch and drone from the "Goldens."

Suspected Disease.

M. ARNOLD (Herts.).—It is "Isle of Wight" disease. The treatment you suggest is the best.

F. HATTON (Warrington).—Cause of death was "Isle of Wight" disease. Thanks for good wishes, which are heartily reciprocated.

J. G. (Acklington).—We do not find disease in the bees sent.

IMPORTANT NOTICE.

We shall be greatly obliged if those of our readers who have their JOURNAL by post from this office, and who wish to continue their subscription, will kindly let us have their order immediately on the expiration of their previous subscription —of which due notice will be given. Failing an order, we shall assume the paper is not required, and therefore discontinue sending it.

We are obliged to take this course, as we are unable to undertake the extra work and expense involved in sending out bills for small accounts, or to bear the losses entailed by sending out the JOURNAL after subscriptions have run out, the recipients failing to notify us that the paper is not required and refusing to pay for those received after the subscriptions had expired. We therefore respectfully notify our subscribers that the JOURNAL will not be sent unless the subscription is prepaid.

Special Prepaid Advertisements

Two Words One Penny, minimum Sixpence.

Will advertisers please read these Rules carefully in order to save trouble, as they will in future be strictly adhered to.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not permissible at above rate, but will be inserted at 1d. per word as* "**Business**" *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of 3s. per ¼in., or 5s. per inch.*

PRIVATE ADVERTISEMENTS are only intended for readers having **Surplus Stock to** *dispose of.* **Driven bees, Nuclei,** *and* **Queens that are reared or imported for sale,** *are Trade Advertisements, and can only be accepted under trade terms.*

Advertisements must reach us NOT LATER than FIRST POST on the 27th of the month for insertion in the next month's RECORD.

Orders for three or more consecutive insertions in "The Bee Journal" entitle advertisers to one insertion in "The Bee-Keepers' Record" free of charge.

PRIVATE ADVERTISEMENTS.

WANTED, cloth-bound copy "Bee-Keepers' Record." Vol. 7, year 1889.—HERROD-HEMPSALL, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

TEN exceptionally well made W.B.C. hives, two lifts each, well painted, 10s. each; twenty W.B.C. hanging frame section racks, complete with dividers, 3s. 9d. each; empty racks, shallow frames, or sections, 1s. 3d. each.—OWNER, "B.B.J." Office, 23, Bedford-street, W.C.

SOFT Bee Candy, medicated or plain, 1lb. glass top boxes, 7d., postage 5d.; 2lb., 1s. 2d., postage, 6d.; reduction for 7lb. and over.—SUGAR, "B.B.J." Office, 23, Bedford-street, W.C.

WE have for sale a number of Bee Books, some very old; returnable list and prices will be sent for 1d. stamp.—MANAGER, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED, good lantern slides on poultry keeping.—Price and particulars to CHANTICLEER, "B.B.J." Office, 23, Bedford-street, Strand, London, W.C.

FOR SALE, ½ plate Koilos camera, with Goerz Dopp anastigmat f/125 lens, can be used either for hand or stand work, twelve single dark slides and film pack carrier. The whole packs in stout block leather sling case, 9in. long, 6in. deep, and 2½in. wide; also light brass telescopic tripod, in leather sling case, all in excellent condition, and used by me to take the illustrations in "Helpful Hints" and "Continental Wanderings." The outfit for sale in one lot for £6; reason for selling have bought a Reflex. A splendid opportunity for anyone wanting a good reliable camera. Will send on approval; Deposit.—HERROD, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED, the following: Cloth editions "British Bee-Keepers' Guide Book," 3rd 4th, 5th.—HERROD, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

FOR SALE, a honey-producing and selling business; a modern apiary, consisting of 100 W.B.C. and combination hives, with lifts and two racks drawn out shallow frames and empty section racks, all exceptionally well made, and majority having oak legs; at home and out apiaries; also four wood houses. Full and complete instructions given, from hiving swarms to the best methods packing and sending sections safely by rail.—"MIDLANDS," "B.B.J." Office, 23, Bedford-street, W.C. v 1

FOUR 28lb. tins of granulated honey, 56s. the lot; tins free; carriage forward, cash or deposit; sample, 3d.—J. S. SHENTON, Husbands Bosworth, Rugby. v 2

FOR SALE, one good stock, in D.C.B. hive; also unused Taylor W.B.C. fitted hive, two skeps, sundries, cost £4, accept £2.—Apply, E., Hargate Lodge, Hilton, Derby.

3 CWT. English honey, 60s. per cwt. f.o.r.; sample, 3d.—C. SPRATT, Meadow Farm, Wetheringsett, Stowmarket, Suffolk. v 4

BUSINESS ADVERTISEMENTS.

COLONIAL HONEY.—LEONARD HALL & CO., 132, Queen Victoria-street, London, honey importers and packers for H.M. War Dept., the leading stores, &c.

COLONIAL and Californian honey, 50s. to 65s. cwt., carriage paid; cash. Sample, 3d.—ROWE, 28a, Moy-road, Cardiff. v 90

COMFORTABLE APARTMENTS for Brother Bee-keepers visiting Douglas. Terms: Tea, bed, and breakfast, 3s. 6d.; or full board, 5s. per day.—HORSLEY'S, Merridale House, top of Castle Drive, Douglas, Isle of Man.

RUN HONEY, in bulk, required, carriage paid Cardiff.—ROWE, 28a, Moy-road, Cardiff. v 70

1915 PULLETS for sale, all popular breeds, from noted strains for winter laying; birds on approval; free catalogue.—DOLLIS PARK POULTRY FARM, Church End, Finchley. v 29

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The recognised centre of practical and scientific bee-keeping in Great Britain. Particulars and conditions of membership may be obtained from the Secretary,

W. HERROD-HEMPSALL, 23, Bedford Street, Strand London.

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BRITISH BEE-KEEPERS' ASSOCIATION.

The Council of the British Bee-Keepers' Association are anxious to obtain gifts of honey for the wounded soldiers in the London Hospital, where it is urgently needed both for food and medicinal purposes. They will, therefore, be grateful for gifts of same, no matter how small, from bee-keepers throughout the British Islands. It is unnecessary to explain our obligations to these brave fellows, who have sacrificed health and limbs for the sake of our country. Gifts should be sent addressed to the Secretary, B.B.K.A., 23, Bedford Street, Strand. The donors' names will be published in the "B.B.J."

W. HERROD-HEMPSALL,
Secretary.

HONEY FOR THE LONDON HOSPITAL.

Amount received ..... 218½ lbs.

BELGIAN RELIEF FUND.

	£	s.	d.
Amount received.....	1	2	1
Miss Springett.....		15	0
Total.....	£1	17	1

BRITISH BEE-KEEPERS' ASSOCIATION.

There are many subscriptions still outstanding for 1915, and the Secretary would be very grateful to receive these as early as possible, so that he may make up his books. The following, culled from a letter received, is commended, not only to members of the B.B.K.A., but also to those of all County Associations:—"I enclose P.O. for 5s. as my subscription to the B.B.K.A. for 1916. I have a P.O. now, and perhaps I might not have one in January, but I do not want to see the Association go down." This from a man who has lost all his bees in two successive years from "Isle of Wight" disease, and also all his money which he had put by for a "rainy day."—W. HERROD-HEMPSALL, Secretary.

IMPROVING THE DENSITY OF HONEY.

Bee-keepers are often desirous, or it may be necessary, to make their honey thicker in consistency, and the usual method is to place the vessel containing the honey in another containing warm water until the honey has evaporated to the desired consistency. If honey is warmed like that, we know it loses its flavour and aroma, and tastes like syrup more or less. The difficulty is to get rid of the water without the application of heat. I discovered a method of doing this, and at the same time utilising apples, thus "killing two birds with one stone." Having a lot of apples which, kept in the ordinary way, would have been spoilt, I took out the core with a corer, peeled and dried them. This may be done by placing them on a plate-rack or near the fire on a tray made of wire-netting and covered with paper. When the apples are quite dry and feel hard they are placed in thin honey, which most apiarists get sometimes. After a few days the honey thickens and may even candy. The principle is that when the apples are dry they take up the greater part of the moisture from the sugar solution, until in time the whole solidifies. You may allow them to stay in until just so much water is taken out that the honey will not candy. Then take the apples out, stew with a little more water, and they will make a very nice dish indeed. In war-time we must save what we can, and this does so with two things: it saves the apples that would otherwise be wasted, and utilises honey that would otherwise ferment. In order to separate the honey from the apples in larger quantities, place a coarse strainer cloth over a vessel and turn the jar containing the apples and honey upside down on to it, and the honey will flow into the lower vessel. The apples may then be treated as described, or kept. Dried apples from the shops may be used, but you ought to dry them a little more in a slow oven. The flavour of some kinds of honey is improved by the process. W. F. REID.

QUEEN-REARING ON THE COTSWOLD HILLS.

Most bee-books urge the necessity of systematically re-queening all colonies each year, so that the strength of stocks may be maintained and their vigour kept at the highest standard.

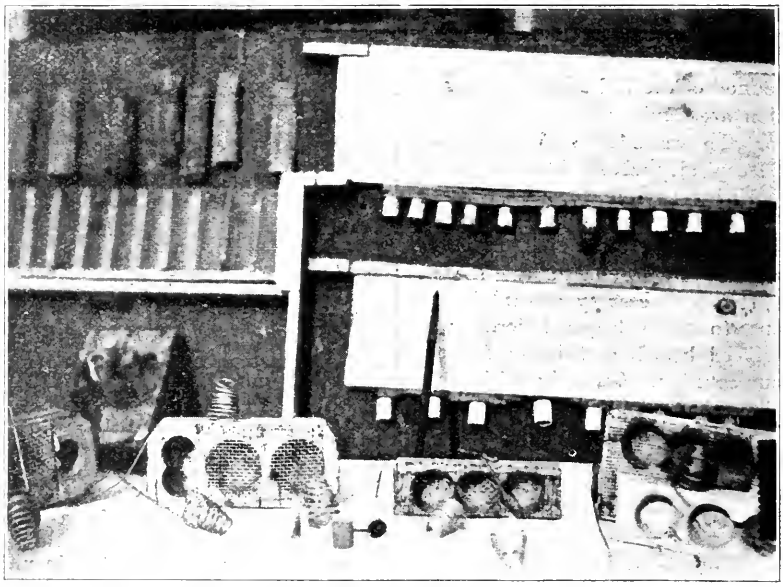
Many of them print accounts of how queens can be raised in order to meet this need. Yet it is commonly known how comparatively few bee-keepers annually renew their queens, and fewer still are the number of those capable of

raising good queens at all times for this purpose.

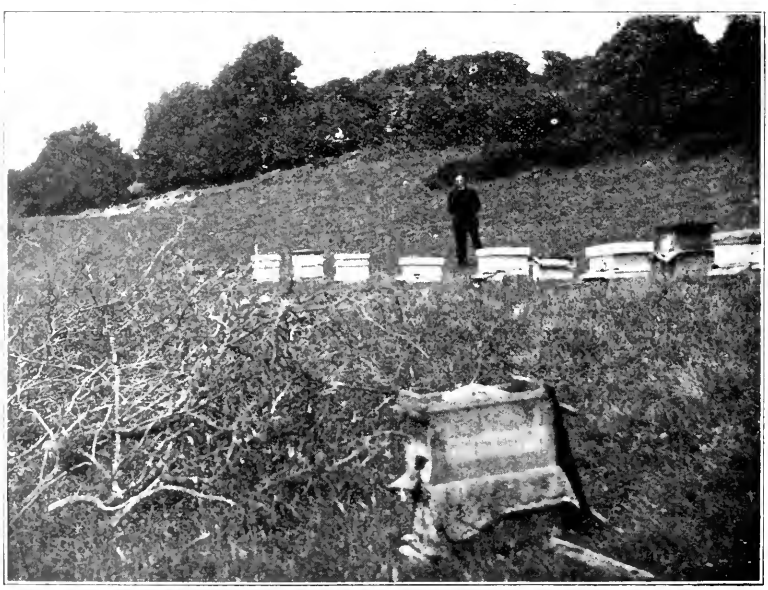
Probably it is because queens are obtained at the expense of honey, and most owners have not the requisite number of stocks to carry out some of the methods suggested. But the importance of re-queening and annually adding fresh blood to the apiary is so vital that it should not be neglected as much as it is.

The heavy winter loss is largely due to the fact that queens are worn out after a season of breeding, and quite unable to produce a lusty population in early autumn to outlive the winter.

This matter has received a good deal of attention by the writer, and the accompanying photographs partly illustrate how queen-rearing is practised on the Cotswold Hills. The races chiefly



(1) QUEEN-REARING APPLIANCES.



(2) A COTSWOLD QUEEN-REARING APIARY.

employed are English Blacks, Dutch, Goldens, and Italians.

Each variety is kept apart as much as possible in separate apiaries, in order to prevent indiscriminate crossing and the loss of some of their distinct characteristics.

Some colonies are far better cell builders than others, and amongst several races there is a marked difference in this respect. Cyprians, for instance, are said to exhibit a lust for producing cells, though I have noticed nothing unusual in the one or two pure Cyprian colonies I possess.

Strong stocks of bees that are known to lavishly produce royal jelly are selected for starting the cups.

When built out and sealed each batch is transferred to an incubating colony prepared to receive them.

Finally, they are distributed to nuclei on the ninth day after the cups were started. Figure 1 shows a collection of a few of the appliances used, and various types of mailing cages.

The importance of breeding from young mothers in their prime has not been overlooked, nor of the necessity of getting cells quickly accepted and built at a high temperature by a strong force of young workers. Cells that are starved at the start are late in hatching, and produce undersized inferior queens.

Figure 2 shows a number of newly-formed nuclei, two to each hive. They are set in a quiet spot by themselves, and are less worried by foragers prowling round the entrances. To the extreme left on a twig is seen a small Dutch swarm from a mating nucleus near by.

No frame smaller than the standard size is employed, and no nucleus less than three frames in capacity.

Indeed, four-frame lots give the best results, are more self-supporting, and when once established need little attention beyond that of inserting ripe cells at regular intervals.

Such lots can even be broken up into two, but it is not often that the demand for more nuclei necessitates breaking up these well established.

(3) INTERIOR OF BEE HUT, AT QUEEN-REARING APIARY.

Figure 3 shows the arrangement of the bee-hut at one apiary, and the table on which the larvæ and jelly are dealt with. It faces due south, and the sun shining in through the windows gives a good light and warmth, both of which are essential to render easier a somewhat tedious operation.

The swing windows easily permit of bees that are brought in on the combs or in supers escaping.

At the side can be seen a drum in which syrup is being heated over a Primus stove. The feed can thus be given to the bees warm each evening, early and late in the season when the nights are chilly. In another article the writer hopes to describe a new pattern nucleus hive, with suggestions as to how it can be expeditiously stocked and managed.—A. H. Bowen, Cheltenham.

ONTARIO BEE-KEEPERS' ASSOCIATION.

ANNUAL MEETING.

This Convention was held at the Hotel Carls-Rite, Toronto, on Tuesday, Wednesday, and Thursday, November 23rd to 25th, 1915. There were nearly two hundred bee-keepers in attendance, and the interest was keen from first to last. Nearly one hundred persons stayed to the afternoon session on the third day until the meeting had to break up at 4.45 p.m. to allow a number to take 5 o'clock trains.

President Byer drew attention to the heavy winter loss of 1914-15, attributing it to inferior stores and the poor breeding season of 1914. He stated that the honey crop had been good west of Toronto, but rather light from that point east. The local demand for honey had been exceptionally good, and generally speaking the prices recommended by the Crop Report Committee have been received.

The Secretary-Treasurer reported a membership of 1,130, and a balance on hand of $233.92. He reported that a larger number of members than ever had taken advantage of the opportunity to purchase pure-bred queens co-operatively through the Association. Sixty local apiary demonstrations had been held during the year, with an average attendance of 32. This, in view of the rainy season, was considered very good.

Instructive addresses were given by Dr. E. F. Phillips, Washington, D.C., on "Temperature and Humidity in the Hive in Winter" and on "Outdoor Wintering." F. W. L. Sladen, of the Central Experimental Farm, Ottawa, gave a report on investigations of "Honey Production from the Golden-rods and Asters," and Prof. L. Cæsar, Provincial Entomologist, read a paper on "Poison Sprays and Poison Baits and their Relation to Bees." Several addresses and discussions on matters of bee management were conducted by practical bee-keepers.

Officers elected for the ensuing year were: President, F. W. Krouse (Guelph); 1st Vice-President, James Armstrong (Selkirk); 2nd Vice-President, W. W. Webster, Little Britain; Secretary-Treasurer, Morley Pettit (Guelph).

Three rather important resolutions were passed as follows:—

(1) To have the Executive Committee with D'Arcy Scott (Ottawa) and Mr. J. D. Evans (Islington) petition the Dominion Government to take measures to prevent the importation of bees from diseased districts.

(2) That Messrs. J. D. Evans, N. M. McIntyre, and R. B. Ross be a committee to request the Ontario Government to increase the fine in the present Act against spraying fruit trees in full bloom, to be not less than $25.00, and not more than $100.00.

(3) That the Provincial Apiarist be requested to conduct experiments to prove the effect upon bees of exposing sweetened poisons for the destruction of grasshoppers, army worms, etc.—MORLEY PETTIT, Secretary-Treasurer.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

"ISLE OF WIGHT" DISEASE, SUGAR FEEDING AND STRAW SKEPS.

[9220] My own experience in several outbreaks of "Isle of Wight" disease goes to prove Mr. Pearman's, that the disease breaks out in a bad form within three weeks of the time that the bees have robbed badly infected honey or hives, but in other cases of slight infection I have seen the disease remain latent for months. As to sugar feeding doing bees harm, I do not think so, for driven bees fed up on good syrup have with me always done well and been my best stocks the next year.

Now as to straw skeps saving bees from "Isle of Wight" disease. I do not think it will happen. I have been in the habit of going into a country district each autumn and driving some cottagers' skeps. They are never sugar fed, but I am sorry to say this autumn I found some so bad with "Isle of Wight" disease that I advised their destruction. I am of opinion that our own old black bees will go down, and that we shall have to be content with races that show more resistance to the disease.—H. WATTS, Bearsted, Kent.

COMB-FOUNDATION IN RELATION TO BEE DISEASES.

[9221] On page 428, November 25th, of the BRITISH BEE JOURNAL Mr. J. Pear-

man accuses comb-foundation of being "a fertile source for producing disease."

Mr. N. E. France, of Platteville, Wisconsin, U.S.A., formerly general Manager of the National Bee-keepers' Association, has repeatedly given his experience concerning immunity of comb-foundation in reproducing any disease. As he is, and has been for years, the State Inspector of Bees, he gathered together a large amount of foul-brood combs. These diseased combs he sent to a comb-foundation factory to be made into foundation by the regular process. He then supplied sheets of this foundation to colonies of bees in apiaries known to be exempt from disease, and in not a single instance did he find it to transmit any disease whatever.

Moreover, Dr. G. F. White, M.D., Ph.D., Expert of the United States Department of Agriculture, engaged in the investigation of bee diseases, gave an account of his experiments on the "Destruction of Germs of Infectious Bee Diseases by Heating," published as No. 92 Bulletin of the Bureau of Entomology, at Washington, May 15th, 1914. He reports in this that a temperature of 57 degrees C. or over, for 10 to 15 minutes, destroys the germs of *Nosema apis* (19 different experiments). A temperature above 63 degrees C. destroyed the germs of European foul-brood if applied 10 minutes. A temperature of 98 degrees to 100 degrees C. destroyed the germs of American foul-brood "*Bacillus larvæ*" in less than five minutes.

In the manufacture of comb-foundation the combs first have to be rendered into wax, which cannot well be done at a less temperature than that of boiling water. Then the wax is again rendered to be purified of its foreign matter. Next, it has to be melted again to be run into sheets, which are afterwards moulded into foundation. Apart from the great heat to which the wax is subjected the writer suggests that no living organism could extricate itself from the embalmed condition the melted wax would cause. It is only sufficient for the experimenter to dip his dry finger into hot wax to ascertain how thoroughly any substance would be embalmed if it had succeeded in escaping the consecutive meltings and the purifying process. *Not one authentic case of transmission of disease has ever been proved against comb-foundation.*

The quotation made from "Gleanings in Bee Culture" antedates the experiments of Dr. White. The latter, who is the discoverer of the differences in the bacilli of the two brood diseases, is one of the most careful investigators living, and his statements upon the subject are most positive.—R. Steele and Brodie.

WASPS *v.* "ISLE OF WIGHT" DISEASE.

[9222] The following facts may be of interest to your readers:—

A queen wasp was recently found here, brought out by the mild weather. Upon microscopic examination it was found to be full of spores of *Nosema apis*. Reference to the Board of Agriculture's publication upon the subject of "Isle of Wight" disease will show that wasps as well as bees are liable to the disease.

It will therefore be of importance to bee-keepers to destroy all queen wasps and their nests on sight, thus doing away with one probable source of infection. In the late summer, when wasps endeavour to rob the bee-hives, they can easily carry the disease from one hive to another, and so spread the plague which is so deadly to all apiarists.—S. M. Pearce, Grantchester, Cambridge.

WEATHER REPORTS.

Westbourne, Sussex.

December, 1915.

Rainfall, 8.69in. Above average, 5.21in.
Heaviest fall, .89, on 9th and 26th.
Rain fell on 26 days
Sunshine, 25.4 hrs.
Below average, 27.8 hrs.
Brightest day, 13th, 4.4 hrs.
Sunless days, 14.
Maximum temperature, 55, on 23rd.
Minimum temperature, 28, on 11th.
Minimum on grass, 20, on 13th.
Frosty nights, 5.
Mean maximum, 48.3.
Mean minimum, 38.4.
Mean temperature, 43.3.
Above average, 3.4.
Maximum barometer, 30.416, on 19th.
Minimum barometer, 28.939, on 24th.

L. B. Birkett.

WEATHER REPORT for the YEAR 1915.

Westbourne, Sussex.

Rainfall, 41.30in. Above average, 10.96in.
Heaviest fall, 1.86, on May 13th.
Rain fell on 172 days, av. 179.
Sunshine, 1,683.8 hrs.
Below average, 122.2 hrs.
Brightest day, June 15th, 15 hrs.
Sunless days, 60, av. 61.
Maximum temperature, 76, on May 26th and July 3rd and 4th.
Minimum temperature, 23, on Mar. 20th.
Minimum on grass, 17, on Mar. 20th.
Frosty nights, 68, av. 72.
Mean temperature, 48.5.
Below average, 0.2.
Maximum barometer, 30.701, on Nov. 21st.
Minimum barometer, 28.794, on Jan. 3rd.

L. B. Birkett.

Notices to Correspondents

Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. All questions must be accompanied by the sender's name and address, not necessarily for publication, but as a guarantee of good faith. There is no fee for answering questions.

Suspected Disease.

W. SEALE (Weybridge), C. S. (Suffolk), ANXIOUS (Bath).—The bees are affected with "Isle of Wight" disease.

J. JAMES (Bridgwater).—It is "Isle of Wight" disease. Remove the two healthy stocks. You can try Izal or one of the advertised remedies on the diseased stocks, but it will be best to destroy them.

IMPORTANT NOTICE.

We shall be greatly obliged if those of our readers who have their JOURNAL by post from this office, and who wish to continue their subscription, will kindly let us have their order immediately on the expiration of their previous subscription—of which due notice will be given. Failing an order, we shall assume the paper is not required, and therefore discontinue sending it.

We are obliged to take this course, as we are unable to undertake the extra work and expense involved in sending out bills for small accounts, or to bear the losses entailed by sending out the JOURNAL after subscriptions have run out, the recipients failing to notify us that the paper is not required and refusing to pay for those received after the subscriptions had expired. We therefore respectfully notify our subscribers that the JOURNAL will not be sent unless the subscription is prepaid.

Special Prepaid Advertisements

Two Words One Penny, minimum Sixpence.

Will advertisers please read these Rules carefully in order to save trouble, as they will in future be strictly adhered to.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not permissible at above rate, but will be inserted at 1d. per word as* **"Business"** *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of 3s. per ¼in., or 5s. per inch.*

PRIVATE ADVERTISEMENTS are only intended for readers having **Surplus Stock to** *dispose of.* **Driven bees, Nuclei,** *and* **Queens that are reared or imported for sale,** *are Trade Advertisements, and can only be accepted under trade terms.*

Advertisements must reach us NOT LATER than FIRST POST on TUESDAY MORNING for insertion in the "Journal" the same week.

Orders for three or more consecutive insertions in "The Bee Journal" entitle advertisers to one insertion in "The Bee-Keepers' Record" free of charge.

PRIVATE ADVERTISEMENTS.

WANTED, cloth-bound copy "Bee-Keepers' Record." Vol. 7, year 1889.—HERROD-HEMPSALL, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

TEN exceptionally well made W.B.C. hives, two lifts each, well painted, 10s. each; twenty W.B.C. hanging frame section racks, complete with dividers, 3s. 9d. each; empty racks, shallow frames, or sections, 1s. 3d. each.—OWNER, "B.B.J." Office, 23, Bedford-street, W.C.

SOFT Bee Candy, medicated or plain, 1lb. glass top boxes, 7d., postage 5d.; 2lb., 1s. 2d., postage, 6d.; reduction for 7lb. and over.—Box 999, "B.B.J." Office, 23, Bedford-street, W.C.

WE have for sale a number of Bee Books, some very old; returnable list and prices will be sent for 1d. stamp.—MANAGER, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED, good lantern slides on poultry-keeping.—Price and particulars to CHANTICLEER, "B.B.J." Office, 23, Bedford-street, Strand, London, W.C.

FOR SALE, ½ plate Koilos camera, with Goerz Dopp anastigmat f/125 lens, can be used either for hand or stand work, twelve single dark slides and film pack carrier. The whole packs in stout block leather sling case, 9in. long, 6in. deep, and 2½in. wide; also light brass telescopic tripod, in leather sling case, all in excellent condition, and used by me to take the illustrations in "Helpful Hints" and "Continental Wanderings." The outfit for sale in one lot for £6; reason for selling have bought a Reflex. A splendid opportunity for anyone wanting a good reliable camera. Will send on approval; Deposit.—HERROD, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

BRITISH BEE-KEEPERS' ASSOCIATION.

The Council of the British Bee-Keepers' Association are anxious to obtain gifts of honey for the wounded soldiers in the London Hospital, where it is urgently needed both for food and medicinal purposes. They will, therefore, be grateful for gifts of same, no matter how small, from bee-keepers throughout the British Islands. It is unnecessary to explain our obligations to these brave fellows, who have sacrificed health and limbs for the sake of our country. Gifts should be sent addressed to the Secretary, B.B.K.A., 23, Bedford Street, Strand. The donors' names will be published in the "B.B.J."

W. HERROD-HEMPSALL,
Secretary.

HONEY FOR THE LONDON HOSPITAL.

Amount received ..... 218½ lbs.

BELGIAN RELIEF FUND.

	£	s.	d.
Amount received	1	17	4
Mr. G. Cummings		1	0
Total	£1	18	4

A ROLL OF HONOUR.

Although bee-keeping is considered a minor pursuit, we venture to say that it has provided more fighting men than the usual average of any industry. To place on record the part the members of our craft have played in the present war we propose to make a "Roll of Honour," and shall be pleased if our readers will forward us the **Names** and **Addresses**, together with the **Regiment** and **Rank**, of any bee-keeper serving his King and Country at home or abroad; also if killed or wounded.

We print a further list of names to those sent in, and shall be pleased to have other names as soon as possible.

Musician A. Cronshaw, Darwen, Lancs.—Royal Marine Band.

Spr. E. F. Ledger, Victoria Street, Llandudno—R.E.

Mr. Tickner Edwards, Burpham, Arundel, Sussex.—R.A.M.C.

BLURTS FROM A SCRATCHY PEN.

THE BUSINESS OF HONEY PRODUCTION.

It has been my endeavour to give an imperfect history of previous attempts at the co-operative marketing of honey, and also some indications of why the demand for honey has of late years increased. To repeat, we owe the boom in honey, slight though it may be, to competition—the competition of other honeys coming into the English market. It has made our home bee-keepers "buck up." To all appearances the improvement has come to stay, and not only to stay but even to become greater. At any rate, so think the Colonials, for I notice in Colonial journals, New Zealand more especially, that conspirators are organising still greater plots for our overwhelming. It is perhaps just as well for us that it is not the province of any censor, either over the seas, or at home, to delete this information. It gives us an opportunity of espionage, and, knowing the invasion that is threatening us, we deserve all we shall get if we do not arrange our home defence. We have plenty of men and 'munitions, too, but where are our leaders? Possibly we might make an excuse (as there is for another army that I could mention) that our insular position has prevented us training leaders of vast armies, working over immense fronts. Well, as this woeful defeet seems now to have a very good chance of being amended in that other army, so let us hope that the time is coming when we, too, shall be able, not only to hold our own trenches, but even to take the offensive.

The keynote of Mr. Hamshar's article in your issue of Jan. 6th, like all others who write on the same subject, is always "Will not the British bee-keepers or a county association give us a help?"—ever forgetting that it is impossible to work without money, and that the Bee-keepers' Association have no funds available for that purpose, and I don't know any county association that is sufficiently rich to undertake it. If, therefore, a society for the handling and distribution of honey is ever found it must be a business by itself, worked quite independently of any association whatever; so although it goes without saying it would be the business of all and every bee association to help to the utmost of its power, because the objects of all associations are to encourage bee-keeping, I might even go further,

and say it seems a one-sided affair to encourage the production of honey, and not consider its distribution, but in this case it seems to be that all associations are "'twixt the devil and the deep sea." They would, if they could, but they cannot.

Pending, therefore, the time until some philanthropic (and business) bee-keepers are prepared to find the necessary capital, what can be done *without money?* My thoughts have led me to wonder, if use could not be made of the local weekly markets, held in so many hundreds of towns in Great Britain. The surrounding neighbourhood brings its poultry, eggs, butter, fruit, etc., etc., and generally finds a profitable sale. Why not bring honey? I am quite aware that there may be some who are too nervous, too modest, or perhaps have a "conscientious objection," to fight their own battle in the market-place. But would it not be possible for the county associations to arrange a local "honey broker," whose business it would be to dispose of the produce at an agreed remuneration? It might also have this advantage. Producers would find it necessary, in order to command a sale, and also to protect their property, to take some care in the preparation of their honey. This would be of itself an education. In many instances County Councils have shown their interest by making grants in aid of bee-keeping. It would cost them nothing more (or perhaps very little) if they would complete their encouragement of the production of honey by their encouragement of the sale, which might be done by granting favourable "stands," consenting to bold advertisement, and any other ways which would suggest themselves locally.

Has any one else any other suggestion better than this, which may not be worth much? Mr. Crawshaw may come along and smite it hip and thigh. Will anyone else join in the debate? As Mr. Hamshar says, "There is nothing like talking to find out the way to do things."
—Jno. Smallwood.

A PRACTICAL RECIPE FOR SOFT BEE CANDY.

To the sweet manufacturer there are several stages easily recognised through which a sugar solution passes during boiling in the production of what are known as "boiled goods."

The character of the final article depends largely on the stage at which the actual boiling is discontinued.

These stages are referred to as the "heights" to which the syrup has been taken. This height may be judged by the thermometer—hence the expression—since during the boiling process water is driven off, and the boiling point of the mixture increases as the amount of water in it decreases, in accordance with laws well known to the scientist exactly, and to the layman generally.

As a rule, however, the experienced sugar boiler relies more on his knowledge of the conditions of his syrup, and its behaviour when cooled, than on the attaining of any definite temperature; for any inaccuracy of his thermometer might end in overdoing his boiling or the reverse, both of which cases might contribute to loss of time and money.

The difficulty usually experienced by the novice in making soft candy is that the material obtained will not crystallise or "grain," but set instead to a glassy-looking mass known commonly as "barley-sugar."

As the amount of boiling which has to be carried out largely determines the type of candy produced, it would be well for the bee-keeper who wishes to make his own candy to get familiar with the changes through which a sugar solution goes on boiling, by carrying out the following preliminary experiment.

If to a pound of sugar half a glassful of water is added and the whole brought to boiling very quickly, the sugar is melted, a hot syrup is formed, and the water then gradually driven off.

As the evaporation of the water proceeds the syrup passes though the following stages, which may easily be discerned by dipping a skewer or fork into the liquid at intervals and immediately cooling it in water and then examining the cooled substance which has been extracted. The adhering sugar, if kneaded between finger and thumb, will first appear "tacky" like rubber solution. This stage is known as the "Thin thread." After two or three minutes more boiling the "soft ball" stage is reached, which gives way to the "hard ball." Further boiling produces the "weak crack," and finally the "hard crack" stage is reached.

Each of these stages is of importance in the production of different sweet stuffs, and the correlation between boiling and hardness in the finished article is apparent.

Considerations of this small experiment by way of introduction facilitates the successful production of soft bee candy, since success depends on the bee-keeper recognising the stage during boiling at which this is produced.

This, however, is not the only factor involved in the production of a "fine grained" candy.

In practice it will be found that the following will always give the desired results.

Take the amount of sugar which it is desired should be candied and place in a saucepan. Add just sufficient water to make up into a thick paste and set on a quick fire or gas ring to boil.

The whole should be brought to boiling point as quickly as possible, being stirred the while. When the boiling point is reached the lid of the pan should be put on in order that the water which is being evaporated may wash any sugar adhering to the side into the syrup, as otherwise these crystals will, upon cooling, start local crystallisation and produce a coarse-grained candy.

When the boiling point has been reached add one quarter teaspoonful of cream of tartar for each two pounds of sugar taken, after having first dissolved the tartar in a little water. At this stage any other medicaments should be added also.

At intervals a fork or skewer is dipped into the liquid and then plunged into cold water. At first the adhering solution will be barely sticky, but after a few minutes' boiling the "thin thread" stage will be reached. Further trials will indicate the "soft ball" stage.

It is between these two stages that the boiling must be discontinued.

The whole secret of successful candy making and the production of a "smooth grain" now depends on the treatment at this stage after fulfilment of the above instructions.

The pan is now removed from the fire and allowed to stand for about three minutes. With a wooden spoon a little of the liquid is pressed against the inside of the saucepan and rubbed hard. This is continued with alternate stirring. After a few minutes it will be seen that the sugar adhering to the side has cooled down and commenced to form small crystals. Our aim is now to induce these to form and stir them into the mother liquor, a process known as "seeding." These small crystals act as a starter, and eventually bring the whole mass out in a fine-grained condition.

The more the syrup is rubbed on to the side of the pan the smoother is the grain of the candy produced. When the whole assumes a milky appearance it should be turned out into suitable well-greased moulds. We use small cigar boxes such as hold 25 cigars. Each holds about one pound of candy, and has the advantage of a lid, which may be securely fastened down so as to exclude the damp, for candy absorbs moisture readily and loses its smoothness, reverting back to a coarse-grained sugar.—Chymist.

WITH THE BEES AT THE FRONT.

By Sergt. A. G. Atwell.

(*Continued from page 6.*)

A few other events happened at Vendresse. I remember the doctor had his horse killed in its stable there, and I also remember an Engineer's limber being struck by a German shrapnel shell just outside the house we were using for a dressing station. The limber was loaded with gun-cotton, sufficient to blow half the village up, but although the wheels were practically blown off the limber the gun-cotton, by some miracle, failed to explode. On the night of October the 15th we were relieved by the French, and went back to a place called Brayne. After a short rest here we marched all night to a small town called Lafère. One thing I remember well of the night march was the enormous number of glow-worms which were to be seen each side of the road on the grass. We entrained at this place on the morning of Saturday, 17th October, and arrived at our destination, a place called Cassel, the following morning at eleven o'clock. During the train journey, which was taking us up towards Belgium, where our final destination was to be, I noticed several small apiaries, which could be plainly seen from the train. The majority of them were fixed up in bee houses, both single and double storied, some tiled and others thatched with straw. Our stay at Cassel was not very long, and we were soon on the march again towards the Belgian frontier, where reinforcements were badly needed. On Tuesday, the 20th October, we crossed the frontier at 10 a.m. I remember we had great fun from this, for when we came to the boundary-stone we all took a running jump over it. Trying to jump in full equipment was no easy task, and not a few made the entry into Belgium head first. We billeted at 6 o'clock that evening, just after passing through Poperinghe. The following morning, Wednesday, 21st, we clashed into the Germans again at a good-sized village called Langemarck. We started fighting about 10 a.m., this, I think, being Trafalgar Day. Refugees were fleeing from the village, and at a big farm, which we took possession of to turn into a first-aid post, we found the morning meal half eaten on the table with the coffee still warm in the cups. It was a farm of good size, with dozens of pigs, fowls, ducks, etc., running about, also perhaps a dozen cows in a field just at the back. They

had only been milked an hour or two before, and the milk was still in the dairy. Needless to say, we helped ourselves liberally to this, although a few preferred to test the big barrel of beer in the cellar. This, I am glad to say, was taken in moderation. The fighting eventually became so heavy that we found it necessary to move right to the other side of the village, where we took possession of a large convent called the Convent of St. Barbara. The convent was not a very ancient building, and possessed a beautiful little chapel with fine stained-glass windows, hand-painted walls and ceiling, statues of different saints on pedestals and in niches in the walls. A very lavish display of the beautiful hand-made lace, famous in these parts of the country, made the altar, with its huge candles and gilt ornaments, one of the finest examples of decorative art of this description that it has ever been my lot to witness. The place was in perfect order when we entered, just as it had been left by the nuns. But within a few hours what a change! Large numbers of wounded, both French and English, were continually being brought in, and all the bedding and blankets from the bedrooms were brought into requisition for them. Some most beautiful hand-worked cushions and pillows and embroidered articles of all descriptions we used to try and make these poor fellows a bit comfortable, and although all these beautiful works of art (which must have taken many years of patient labour to make) were ruined, I am sure they served the greatest purpose that their creators could have wished for.

(*To be continued.*)

MADAME MAETERLINCK AS "MÉLISANDE."

MR. T. B. BLOW IN FRANCE.

No doubt the name of Mr. Blow will be familiar to the majority of our readers, as it is not many years since he was the proprietor of the bee appliance factory which he established at Welwyn, the business of which is now carried on by Mr. E. H. Taylor. Soon after the commencement of hostilities Mr. Blow placed his services at the disposal of the country. He has been engaged with his motor in hospital work in France, and for just over

twelve months has been leading a very strenuous life, although he was 63 years of age on the 8th of November, 1915.

Near Yvetot, where Mr. Blow is stationed, is the old Abbey of St. Wandrille, which is owned by M. Maurice Maeterlinck, well known as the author of "The Life of the Bee." He and Madame Maeterlinck decided to give a representation of *Pelléas et Mélisande* and *Macbeth* in their grounds, the proceeds to go to the relief of Belgian distress. The audience was limited to fifty, and M. Maeterlinck, hearing that Mr. Blow was at Yvetot, and of his long connection with bees, invited him to be present, and he says, "It was one of the most wonderful things I have ever seen." *Macbeth* had to be abandoned, but Madame Maeterlinck took the part of "Mélisande," and the photograph shows her in that character. For the rest we cannot do better than quote from a letter sent to us by Mr. Blow on November 12th last:—

"I am intending to stick on here, though I do not at all relish the view of the coming winter. However, the work will not be so hard as last winter, when

MR. T. B. BLOW SUPERINTENDING THE REMOVAL OF WOUNDED SOLDIERS.

almost every day I had to go to Dieppe and back (64 miles), usually in the worst weather over very bad roads. Now all our people and supplies come via Havre, which is convenient by rail and saves motor service, which is, of course, very costly. During the whole time I have been here (11 months) I always had some personal friends at work here, which has been very cheering to me. All being

MR. T. B. BLOW.

voluntary workers, our staff changes a good deal, and now of those who were here at the start of the hospital, there remains only myself and one other. Our 'Médecin Chef' (Dr. Wright) is a bee-keeper.—THOMAS B. BLOW."

The blocks for the two illustrations on this page have been kindly lent by the *Hertfordshire Express*.

HONEY PRODUCTION IN BRITISH COLUMBIA, SEASON OF 1915.

By F. Dundas Todd, Foul Brood Inspector.

On the first day of October, 1915, there were listed on the records of the Department of Agriculture the names of 1,160 bee-keepers in the Province. From all of them there was requested a honey crop report for the season and 326 responded. Briefly stated, we get the following result:—1915: Colonies in April, 2,417; Crop, in pounds, 57,246; Average per hive, 23.

Assuming that those reporting are fairly representative bee-keepers, a little calculation will show that the total honey crop of the Province in 1915 was probably about 100 tons.

The oldest bee-keepers in the Province are unanimous in stating that the season of 1915 yielded the poorest honey crop in their experience. Our oldest bee-keeper, the most successful in the Lower Fraser district, has kept bees for thirty years, and he considers his crop as being only one-third of an average, and as being the poorest in his time.

We all know how unseasonable the

weather was during the spring and summer months, and so must attribute the poor crop to weather conditions. Reports in the bee journals indicate that the unfavourable conditions were prevalent all over the North American Continent, and that the honey crop as a whole was much under the average.

The warm weather of April had a most extraordinary result in the bush country in Matsqui, where soft maples abound. On April 15th, the writer found an average of 75 pounds a colony of delicious maple honey all sealed in the supers, a record worthy of note, and clearly indicating the importance of strong colonies early in spring.

The most noticeable feature of the reports from the Inspector's point of view was the fact that nearly everybody had at least a little honey, a marked contrast to previous years when a very large percentage had no crop at all. Undoubtedly our bee-keepers are becoming more skilled in their calling, and in an average season will probably surprise themselves with their success.

As nectar was scant, comb building was practically an impossibility. The best crops consequently were got by those who had plenty of spare combs. In British Columbia, we need at least thirty combs to the colony, ten to winter on, ten to increase the dimension of the brood chamber on May 1st, and ten for the start of the honey crop. No bee-keeper will ever have too many spare combs, and it is such seasons as 1915 that demonstrate their value. In many instances, practically the whole honey crop was stored in one day. Where extracting combs were ready and colonies were strong as much as 30 pounds per colony were stored in twelve hours; bee-keepers without combs got nothing.

One bee-keeper in the wet belt, who reported an average of 60 pounds to the colony, says that a double-walled hive with an air space between the walls gave as in former years a yield just double that of the average of the other colonies. Evidently the greatest need of our bee-keepers is not to keep more bees, but to keep their present colonies better.

The writer wishes to state that, while in British Columbia we can point to very few expert bee-keepers, he considers that our average bee-keeper will compare very favourably with an equal number in any other part of the world, and that from now on honey production in the Province will progress at a very rapid pace. Thousands of tons of nectar that at present go to waste every year on our mountain sides and in our great valleys will soon be gathered for human food, and British Columbia will advance to the very front rank as a honey-producing region. The delicious flavour of our honey will always ensure for it a ready market once its quality is known.

The one dark spot in the field of vision is the presence of foul brood. The outbreaks in Vancouver, Chilliwack, and Essondale have been vigorously fought all summer. In Vancouver, nineteen colonies were found affected as against thirty-four last year; Essondale, none as against five; Chilliwack, eighteen as against five. The increase in Chilliwack was probably due to feeding back infected honey in the open air, spreading the infection to every colony in two apiaries.

New outbreaks were discovered in Nanaimo, Salmon Arm, Rutland, and Lardo.

All affected colonies have as in the past been destroyed by fire.

The rapid development of apiculture in the Province is naturally resulting in a widespread movement of colonies from one district to another, also in the importation of queens from regions outside of the Province, and it is by such movements that foul brood is largely spread. Up to the present, practically all cases of disease have been discovered by the inspectors, but the bee-keepers themselves must become interested in the condition of the brood nests and examine them at least in the months of April and May, reporting at once to the Department any suspicious conditions.

ECHOES FROM THE HIVES.

My bees are gone with "Isle of Wight" disease. I lost them all in 1914, but I had a stock given me last March; it did not live very long. I finished it off just as it was, honey, brood, and cheese-box, in a bonfire. In May I had two stray swarms come to me. The first, a very large swarm, was hived in a Royal Notts hive that had not had bees in for some years. It started well, and in fourteen days I put a rack of sections on, but the bees never occupied them, and soon showed signs of "Isle of Wight" disease. The wasps finished them off. The other—a small cast—was put into a hive that was burnt out with a painter's lamp, and had everything new in the interior, but it never strengthened as it ought to have done (the weather was wet). When I went to pack it up there was plenty of honey, a lot of brood, but only a few bees, so I expect it will go this winter.

There were four other swarms came to the village, but they are all dead. Where all the bees come from I cannot make out, as we have heard of several other swarms going over, and there are scarcely any bees left in the neighbourhood.—JOHN R. TRUSS, Ufford, Stamford.

The honey season in this part of Yorkshire has not been a good one. The wet weather during the whole of July completely spoiled the clover crop. However, the sycamore and charlock have yielded well, but I thought it best not to extract until after the visit to the moors. The heather season was short and good while it lasted, so we were able to bring full supers back.

Most of my stocks had from 35 to 40 lbs. of stores when I packed for winter, and that without feeding.

The bees have had one or two cleansing flights, the best undoubtedly being on Christmas Day. A brother bee-keeper passing on Christmas morning called me out of the house to say the bees were swarming! It certainly did sound very merry in the garden. Just a reminder of pleasant hours that are passed, and a foretaste of those that (we hope) are in store.

Wishing continued success to both RECORD and JOURNAL, and best wishes to all bee-keepers for the new year.—H. GILBERT BERRY, Shelley, Huddersfield.

HONEY IMPORTS.

The registered value of honey imported into the United Kingdom during the month of December, 1915, was £6,159. From a return furnished to the BRITISH BEE JOURNAL by the Statistical Office, H.M. Customs.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

THE BEES AT THE HEATHER.

[9223] From the day we took our bees to the heather to our first visit to them was a period of twenty-four days. During this time the weather was most unfavourable, with cold easterly winds, little sunshine, frequent cold showers, and on at least two nights a touch of frost.

A small party of us drove with horse and trap intending to have a pic-nic amongst the heather, and we arrived there about noon. We were about half-way through our *alfresco* lunch when along came a "Scotch mist," a thorough drizzle, which lasted all the afternoon and put a stop to any idea of bee work. Curious to relate, whilst we had about four hours of incessant rain we noticed on our way back that the roads were quite dry after we had covered about three miles of the journey, and on arrival home we learned that there had not been a drop of rain during the whole of the day. A walk round the hives as soon as we arrived revealed the fact that very few bees were flying, and at one hive robbing had taken place, but closer observation indicated that the robbing had ceased in favour of the robbed stock.

The heather was at its best, but scarcely a bee did we see working on it.

Four days later I paid another visit alone. The day was rather cold, and the sky overcast, and although the bees were flying more freely, I failed to see any on the heather. To begin my investigation I chose one of the strongest stocks, and found the shallow frame super about half full of bees and not a vestige of honey in any of the combs! Where was the inspiring odour which usually assails one's nostrils when manipulating at the heather? I regret to say it was conspicuous by its absence. Not the least smell of heather honey did I get from the six stocks I examined. September had come before the "bee" weather arrived, and the heather was past its best and our stocks kept dwindling. Breeding had practically ceased, and we could only hope that the bees would have the chance of storing sufficient for their winter needs, and gave up the hope of obtaining any surplus. We brought the ten hives home on October 4th, feeling very little different in weight than when we took them. Only two stocks yielded any surplus—one four pounds and the other six, but they were all fairly well supplied with stores for the winter except the two weakest stocks, which had to be fed.

We blame the abnormally cold and wet August following a dry and cold spring for our failure. The heather did not bloom as in some years; many of the flowers failed to open, and the lack of warmth checked the flow of nectar. I have taken bees to the heather three times previously and had a good surplus

each time. In the light of that experience we are looking forward to another trip with better luck next time.—LANCASTRIAN.

REASONS FOR LATE SWARM

(page 456, Vol. 43).

[9224] Though my letter of August 31st was not intended to raise the question of why the bees swarmed, but to point out that other reasons than want of room will cause them to do so, I will give you a few more particulars of the hive.

I had taken off the top rack of shallow frames about a fortnight previously, since when the hive had not been touched, so it was not induced by manipulation. Neither do I think that the queen had been injured at that time either by myself or by the bees, as no smoke was blown into the bodybox, only into and under the top rack when putting on the clearer, and there was a queen excluder under the lower rack which was left on.

I did not mean to imply that the hive was weak, but that it was not strong enough to swarm. The queens in the cells I cut out were very vigorous, and as the bees are still in good condition I do not think that there was any diseased brood in the hive at the time. I had noticed that this hive was retaining its drones after all the others had killed theirs.

If they were superseding the queen the question still remains, "What caused them to swarm?"

I had a big stray swarm come in on August 17th, which I hived on shallow frames, but it has since died out—"Isle of Wight" disease I expect, though they did not show so many signs of it as did two of my stocks last year, which, nevertheless, came through the winter all right and gave me a lot of honey this summer. —ARTHUR F. HARDY.

He is not worthy of the honeycomb
That shuns the hive because the bees have stings.—*Shakespeare.*

Even the beeswax business here interests the Germans of Luneberg.—*Evening News.*

THE BEE.

(*From the French by Jno. Smallwood.*)

Satin winged, nor touching earth,
I roam the space.
From morn till eve with hum of mirth
I tireless race.

Each chaliced bloom, to my embrace
Gives sweet reward.
The fruitful flowers my visits lace
In sweet accord.

My venom sting! If trouble sore
To every foe.
Defenceless, could I guard my store?
Nor peace should know.

In hours of toil, my days I haste,
But ne'er complain,
If meed I earn, my honey taste,
Then I'll remain

YOUR FRIEND THE BEE.

Queries reaching this office not later than FIRST POST on MONDAY MORNING will, if possible, be answered in the "Journal" the following Thursday. Those arriving later will be held over until the following week. Only SPECIALLY URGENT queries will be replied to by post if a STAMPED addressed envelope is enclosed. All queries must be accompanied by the name and address of the sender, not necessarily for publication, but as a guarantee of good faith. Correspondents are requested to write on one side of the paper only.

DUTCH BEES AND "ISLE OF WIGHT" DISEASE.

[9041] You may like to know that the bees I had that were suffering from "Isle of Wight" disease, and to which I united a Dutch queen and two frames of bees that a reader of the JOURNAL kindly sent me, are alive, although they still seem to be suffering from "Isle of Wight" disease and can't fly much. They are also soiling the entrance of their hive very much. Is there anything I can do for this, or is it only one of the symptoms of "Isle of Wight" disease? I put on a fresh cake of candy to-day, and there seems quite a nice lot of bees. Do you think there is any chance of them being any good when the weather gets better? I keep the entrance and alighting-board sprayed with Izal. Will you

kindly advise me through the JOURNAL as to what you think?—V. C. WEDGWOOD.

REPLY.—You cannot do better than continue the treatment with Izal. The bees may pull round during the summer, but the probability is they will eventually succumb to the disease.

Notices to Correspondents

Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. All questions must be accompanied by the sender's name and address, not necessarily for publication, but as a guarantee of good faith. There is no fee for answering questions.

Honey Samples.

R. S. W. (Hunmanby).—Honey No. 1, mainly from clover; of excellent quality, worth 75s. per cwt. No. 2, also clover honey. The granulation is rather coarse, otherwise honey is very good quality, worth 65s. to 70s. per cwt. The wax is good. No. 3 is rather dark. You should get 1s. 6d. per lb. for it.

Suspected Disease.

G. H. BERROW (Shipton).—The bees appear to be healthy. Those in the front of the hive had evidently become detached from the main body and died of cold. The maggots are the larvæ of a fly. They may generally be found among dead and decomposing bees.

ANXIOUS (Suffolk).—The cause of bees dying was "Isle of Wight" disease. Do not use the combs again.

F. N. COLEBROOK (Faldouet).—The bees were pressed flat in post, but there were symptoms of "Isle of Wight" disease. These, coupled with the conditions you describe, point to "Isle of Wight" disease as the trouble.

H. W. B. (Essex).—We are sorry to confirm your opinion—it is "Isle of Wight" disease.

Special Prepaid Advertisements

Two Words One Penny, minimum Sixpence.

Will advertisers please read these Rules carefully in order to save trouble, as they will in future be strictly adhered to.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not permissible at above rate, but will be inserted at 1d. per word as* **"Business"** *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of 3s. per ½in., or 5s. per inch.*

PRIVATE ADVERTISEMENTS are only intended for readers having **Surplus Stock** *to dispose of.* **Driven bees, Nuclei,** *and* **Queens that are reared or imported for sale,** *are Trade Advertisements, and can only be accepted under trade terms.*

Advertisements must reach us NOT LATER than FIRST POST on TUESDAY MORNING for insertion in the "Journal" the same week.

Orders for three or more consecutive insertions in "The Bee Journal" entitle advertisers to one insertion in "The Bee-Keepers' Record" free of charge.

PRIVATE ADVERTISEMENTS.

TO CLEAR. Weed foundation, 14lbs. 2/- lb.; feeding-bottles, 2 doz. at 1/- each, complete; 6 doz. shallow frames, clean and healthy, 5/- doz.; rack, 1/3 extra.—Box 56, BEE JOURNAL Office, 23, Bedford Street, W.C.

FOR sale, one hundredweight and a half of clover honey, good quality, price 60/- hundredweight.—J. DODSWORTH, School House Hill, Malton. v 8

FOR sale, extracted honey, in 14lb. tins, about 3 cwts., £3 10s. per cwt., sample 2d.—ARTHUR ADCOCK, Meldreth, Cambs. v 9

WANTED, up to 12-stone of pure white clover honey.—Sample and price to WRIGHT, Keyingham, Hull. v 10

HEATHER honey, pure ling, sample 4d.; also heather mixture.—HOLMES, Welshpool. v 11

WANTED, cloth-bound copy "Bee-Keepers' Record." Vol. 7, year 1889.—HERROD-HEMPSALL, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

SOFT Bee Candy, medicated or plain, 1lb. glass top boxes, 7d., postage 5d.; 2lb., 1s. 2d., postage, 6d.; reduction for 7lb. and over.—Box 999, "B.B.J." Office, 23, Bedford-street, W.C.

WE have for sale a number of Bee Books, some very old; returnable list and prices will be sent for 1d. stamp.—MANAGER, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED, good lantern slides on poultry-keeping.—Price and particulars to CHANTICLEER, "B.B.J." Office, 23, Bedford-street, Strand, London, W.C.

FOR SALE, ½ plate Koilos camera, with Goerz Dopp anastigmat f/125 lens, can be used either for hand or stand work, twelve single dark slides and film pack carrier. The whole packs in stout block leather sling case, 9in. long, 6in. deep, and 2½in. wide; also light brass telescopic tripod, in leather sling case, all in excellent condition, and used by me to take the illustrations in "Helpful Hints" and "Continental Wanderings." The outfit for sale in one lot for £6; reason for selling have bought a Reflex. A splendid opportunity for anyone wanting a good reliable camera. Will send on approval; Deposit.—HERROD, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED, the following: Cloth editions "British Bee-Keepers' Guide Book," 3rd 4th, 5th.—HERROD, "B.B.J." Office, 23, Bedford street, Strand, W.C.

FOR SALE, a honey-producing and selling business; a modern apiary, consisting of 100 W.B.C. and combination hives, with lifts and two racks drawn out shallow frames and empty section racks, all exceptionally well made, and majority having oak legs; at home and out apiaries; also four wood houses. Full and complete instructions given, from hiving swarms to the best methods packing and sending sections safely by rail.—"MIDLANDS," "B.B.J." Office, 23, Bedford-street, W.C. v 1

LEE'S Steam Wax Extractor, new last season, 7s. 6d., or exchange.—OWEN, Wernolen, Groeslon, S.O. v 6

FOR SALE, thirty W.B.C. hives; one extractor; one honey ripener; three dozen section racks; six clearing boards; three smokers; three dozen queen excluders; one dozen glass feeders; two veils; 5lbs. weed super foundation; 7lbs. weed brood foundation; eight dozen metal dividers; three gross metal ends; one crate bar frames, not made up; owner joined the Army; reasonable offer accepted.—MISSON, Mill-road, Stetchworth, Newmarket. v 7

BUSINESS ADVERTISEMENTS.

WANTED to purchase, up to 2 tons fine English honey.—Offers to H.I.M., c/o BRITISH BEE JOURNAL, Bedford Street, Strand. v 12

COLONIAL HONEY.—LEONARD HALL & CO., 132, Queen Victoria-street, London, honey importers and packers for H.M. War Dept., the leading stores, &c.

COLONIAL and Californian honey, 50s. to 65s. cwt.. carriage paid; cash. Sample, 3d.—ROWE, 28a, Moy-road, Cardiff. v 90

COMFORTABLE APARTMENTS for Brother Bee-keepers visiting Douglas. Terms: Tea, bed, and breakfast, 3s. 6d.; or full board, 5s. per day.—HORSLEY'S, Merridale House, top of Castle Drive, Douglas, Isle of Man.

RUN HONEY, in bulk, required, carriage paid Cardiff.—ROWE, 28a, Moy-road, Cardiff. v 70

1915 PULLETS for sale, all popular breeds, from noted strains for winter laying; birds on approval; free catalogue.—DOLLIS PARK POULTRY FARM, Church End, Finchley v 29

THE
British Bee-Keepers' Association.

Insure *now* against loss by damage done through bee stings. All particulars from

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NOTE.—The Bonds of the Corporation are accepted by all Departments of His Majesty's Government.

IN WAR-TIME

The Nation's Food is of prime importance. The products of the Apiary, of Poultry and Farm Stock, of the Fruit and Vegetable Garden can be augmented. Buy your stock, sell the produce, through

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WINDSOR HOUSE, Breams Buildings, LONDON, E.C.

COVERS FOR BINDING
"British Bee Journal"
OR THE
"Bee-keepers' Record"
Cloth Gilt, **1**/- post free.

BRITISH BEE-KEEPERS' ASSOCIATION.

The Council of the British Bee-Keepers' Association are anxious to obtain gifts of honey for the wounded soldiers in the London Hospital, where it is urgently needed both for food and medicinal purposes. They will, therefore, be grateful for gifts of same, no matter how small, from bee-keepers throughout the British Islands. It is unnecessary to explain our obligations to these brave fellows, who have sacrificed health and limbs for the sake of our country. Gifts should be sent addressed to the Secretary, B.B.K.A., 23, Bedford Street, Strand. The donors' names will be published in the "B.B.J."

W. HERROD-HEMPSALL,
Secretary.

HONEY FOR THE LONDON HOSPITAL.

Amount received ..... 218½ lbs.

A ROLL OF HONOUR.

Although bee-keeping is considered a minor pursuit, we venture to say that it has provided more fighting men than the usual average of any industry. To place on record the part the members of our craft have played in the present war we propose to make a "Roll of Honour," and shall be pleased if our readers will forward us the **Names** and **Addresses**, together with the **Regiment** and **Rank**, of any bee-keeper serving his King and Country at home or abroad; also if killed or wounded.

We print a further list of names to those sent in, and shall be pleased to have other names as soon as possible.

Capt. Earl Winterton.—Sussex Yeomanry.

Sergt. D. G. Draeger.—2/4 Sussex Regt.

Sergt. A. Purser.—9th Royal Sussex Regt.

Signr. G. R. Reed.—1/4 Royal Sussex Regt.

Cpl. W. W. Baum, Mt. Sorrel Cottages, Stoney Stanton, Hinckley.—R.A.M.C.

BRITISH BEE-KEEPERS' ASSOCIATION.

The monthly meeting of the council was held at 23, Bedford Street, Strand, London, W.C., on Thursday, January 20th, 1916. Mr. C. L. M. Eales presided. There were also present: Sir Ernest Spencer, Messrs. J. Smallwood, G. W. Judge, A. G. Pugh, G. S. Faunch, A. Richards, J. Herrod-Hempsall. Association representatives: G. Bryden (Crayford), G. R. Alder and G. Horscroft (Essex), H. Walls (Mid-Kent).

In the absence of the secretary through illness his duties were undertaken by J. Herrod-Hempsall.

Letters expressing regret at inability to attend were read from Miss M. D. Sillar, Messrs. T. W. Cowan, W. F. Reid, T. Bevan, J. B. Lamb, General Sir Stanley Edwardes, Colonel H. F. Jolly, Rev. F. S. F. Jennings, and Dr. W. Anderton.

The minutes of the council meeting held on December 16th, 1915, were read and confirmed.

The following new members were elected:—Mr. J. Farquharson, Mr. E. E. Brown, Mr. J. P. London, Mr. E. R. Seadon, Mr. A. Tucker, and Mr. E. B. Wise.

The report of the finance committee was presented by Mr. Smallwood, who stated that payments into the bank for December amounted to £28 3s. 11d., the payments amounted to £83 15s. 10d., the bank balance at the end of December being £100 16s.

The balance-sheet for 1915 not being quite complete it was resolved that it be presented at the next meeting after audit.

A letter was read from General Sir Stanley Edwardes suggesting that the annual meeting be held at an earlier hour on account of the darkened condition of the streets. After discussion it was proposed by Sir E. Spencer, seconded by Mr. A. Richards, and carried: That the annual meeting and conversazione be held and refreshments provided as usual. Arrangements as to room, lecture, or papers, etc., be left to a committee.

It was proposed by Mr. Pugh, seconded by Mr. Eales, and carried: That the committee consist of the following members:—Messrs. W. F. Reid, J. B. Lamb, G. W. Judge, J. Smallwood, A. Richards, J. Herrod-Hempsall, and the Secretary, W. Herrod-Hempsall. The committee to have full powers to act, three to form a quorum, the meeting to be held within the next fortnight.

The report of the examining board on the lecture list for final certificate held earlier in the day was presented by Sir

E. Spencer, and it was resolved to grant certificates to Miss P. Wilks and Mr. A. Riley.

A letter from the Scottish Bee-keepers' Association, conveying fraternal greetings, was read, and the secretary was instructed to write and convey the council's hearty reciprocation.

A letter from Mr. J. Pearman *re* Royal Show was referred to the exhibition committee for reply.

Colonel H. F. Jolly wrote offering to again give a W.B.C. hive to the runner-up for the W. Broughton Carr Memorial Gold Medal at the Royal Show, Manchester.

The offer was gratefully accepted, and the secretary was instructed to write and convey the council's appreciation of his great kindness.

Mr. Alder was thanked for his efforts to obtain a grant from the Fruiterers' Company, and it was resolved to send a letter on the lines of Mr. Alder's remarks to the master of the company asking for a donation to the funds of the British Bee-keepers' Association from his company, and enclose a copy of Mr. Cowan's pamphlet on "Bees and Fertilization of Fruit Blooms."

Mr. Alder proposed, and Mr. Faunch seconded: That a typewritten copy of the report for 1915, as read to the meeting, be sent to each member of the publication committee, and subject to their approval the same be printed.

The secretary was instructed to send letters of condolence to Rev. F. S. F. Jannings and Mr. Bevan, and Mr. J. Herrod-Hempsall was asked to convey to the secretary the condolences of the council, and their hope that he will shortly be restored to his usual health. On the proposition of Mr. Eales, Mr. J. Herrod-Hempsall was thanked for the able manner in which he had carried on the duties for the secretary.

Next meeting of council, February 17th, 1916, at 23, Bedford Street, Strand, London, W.C.

PROSECUTION FOR SELLING HONEY UNDER A FALSE TRADE LABEL.

The following cutting from the *Glasgow Herald* has been sent on to us by a reader. The report is rather short, but we are able to give our readers a few more particulars as to what led up to this firm being prosecuted. At the time the Royal Lancs. Show was being held at Blackburn last year, Mr. A. S. Dell, of Leigh, Lancs., went into a grocer's shop on business and noticed some stuff in jars labelled "Pure Scotch Heather Honey." He purchased a jar and found it to contain foreign honey, not only of poor quality, but fermenting and practically unfit for food. This was being retailed at 1s. 6d. per 1lb. jar. Mr. Dell brought the jar to the show and asked Mr. J. Herrod-Hempsall, who was lecturing there, to say what he thought of it, and to bring the jar for our opinion also. There was only a trace of heather honey in it, and the jar was taken by Mr. J. Herrod-Hempsall to the Board of Agriculture and the facts laid before it. An inspector of the Board was deputed to purchase another jar, a sample from which was sealed up and forwarded to Mr. G. Hayes, at Beeston, for examination of the pollen grains. He reported there was very little heather, and the bulk of the honey was foreign. As the firm who supplied the honey was domiciled in Scotland the matter had to be referred to the authorities there, thus causing considerable delay. We consider the fine totally inadequate, but the conviction will no doubt help to check this practice. As we said in our Leader for Jan. 6th, we shall be pleased to help any of our readers to bring any contravention of the Merchandise Marks Act to the notice of the Board of Agriculture, and, if possible, get the offenders penalised. Our readers may remember we helped to secure the conviction of another firm in the early part of last year.

"NOT SCOTCH HEATHER HONEY.

"Yesterday, at Paisley Sheriff Court, Alexander Cairns and Sons, Clark Street, Paisley, admitted a charge of having, on or about June 22nd, applied to the contents of 24 1lb. jars of honey, sold and consigned to a party in Blackburn, by means of labels affixed to the jars, a false trade description which represented them to be Scotch heather honey, whereas they were not of the nature described. It was explained on behalf of the respondents that the moment their attention was called to the fact that their labels had not been changed they at once recalled all the honey from their various customers. Sheriff Blair imposed a fine of £10, which was paid."

DERBYSHIRE NOTES.

It is at the beginning of a new year that one can look back upon past experiences, draw lessons therefrom, and make plans for the forthcoming season. I know that the sentiment just expressed is as old as the hills, and has become to us very little more than mere cant. But

still, I will venture to stick to it. Now, in the comparatively dead season, it is time to think on past, present and future.

If I were asked to state what is the lesson most forcibly impressed upon my mind by the experiences of the past year, my answer would have reference to the heather harvest. Last year's crop was late, short and sharp, and only in few places was a surplus obtained. I have before time expressed the view that the ordinary hive is of little good for the moors. I am beginning to think it is almost useless. My best success last year came from a small hive, little more than a travelling-box, containing only eight standard frames and a super of shallow bars, into which the bees, for lack of room below, were forced to crowd. This hive had neither legs, alighting-board, nor porch, and I did not find that the bees were at all incommoded for lack of these luxuries. Such a hive takes up but little room when travelling, and is easily handled by one person. At least twenty could be packed on an ordinary dray without tiering up. I shall pursue the experiment further next year, I hope.

Like most others, bee-keepers will feel the pinch of these comparatively hard times. I wonder how many of our craft were tempted to take the last ounce of honey from the hives last year, and then, because of the heavy price of sugar, neglected to see that their bees were well supplied with good syrup. My bees went into winter quarters on heather stores. For years now I have found such honey good for wintering on. I hope again to have the same experience. But the winter so far has been quite mild and open, and again, as in all similar seasons, there will be great consumption of stores. Let us see to it that stocks are not unwittingly starved to death. Many stocks will already have begun to breed, and it is during breeding time that food is used up.

I question whether bee-keepers are now getting the proper equivalent in money values for their honey. All bee material has risen in price, glass bottles have been difficult to obtain, and are now nearly double in value, sugar for feeding is exceedingly dear, and yet I cannot see that honey is sold at any higher price than before the war began. For my own part I sell but little wholesale, but found that the grocers with whom I dealt were inclined to look upon honey as one of the first luxuries to be abandoned as unnecessary when the present trouble began. There is still a lamentable ignorance with regard to food values in certain quarters.

With regard to the bee-keepers' particular *bête noire*—microsporidiosis—I am really glad that up to now I can add little of value to the discussion, not having yet had the plague in my own apiary. I have seen plenty of it in various parts of the county, and have furthermore heard of its ravages in other apiaries. When it comes to me, if it does come, I intend not to go under without a fight. But there seems to be little to guide me, even in the experiences which bee-keepers have accumulated during this last ten years. Principally the records seem to be records of failure—not of success.

In conclusion, I may say that I am an optimist with regard to bee disease. The plague will die out, and I am inclined to think that when the storm has spent its force apiculture will be the better for the visitation. The stocks that weather the tempest will be those that are most vigorous. There will be a survival of the fittest from which the bee-keeper can again extend, being sure that he has better bees than ever he had before.—D. Wilson.

TOTAL HONEY IMPORTS FOR THE YEAR 1915.

	£
January	2,735
February	3,567
March	2,299
April	2,116
May	3,392
June	15,356
July	11,562
August	20,003
September	9,936
October	14,869
November	685
December	6,159
Total ...	£92,679

CUMBERLAND AND WESTMORLAND BEE-KEEPERS' ASSOCIATION.

The long absence from your columns of any particulars regarding the Cumberland and Westmorland Bee-keepers' Association may have created the impression that the association is dropping behind the times, but such is by no means the case. There is just as much enthusiasm to-day as when Mr. Smallwood wrote his interesting experiences, "Midst Pike and Fell," some years ago.

The association went into winter quarters with a membership of 678 and 2,166 stocks of bees. Of this number of stocks 1,923 are in hives and 73 in straw skeps, all passed by the experts as

healthy; 59 slightly affected with foul brood; also 106 in hives and five in skeps either showing symptoms of "Isle of Wight" disease, or situated in infected or suspected areas, which prevents them being classed as healthy.

The season of 1915 cannot be marked down as one worth remembering. The clover returns may be described as fair in a few districts, but very poor if considered generally, whilst the heather season in both counties has been an absolute failure. There is, however, no grumbling. We had an excellent all-round season in 1914, and we do not expect every day to be a Sunday; but though varying seasons do not disturb us, we are not without our troubles.

At the foundation of the association in 1901 it was discovered that very few districts in Cumberland were free from foul brood, but by careful attention the disease was reduced to 9 per cent. in 1910. The present returns show it further reduced to 2.73 per cent., and were it not for a few non-members who keep the flame alive, it would cease to worry, hence the firm stand taken by Cumbrians for foul brood legislation ever since 1904. With the fruits of victory in view we were beset by a more deadly foe in the "Isle of Wight" disease.

The first reported outbreak of this scourge in 1910 was a general call to arms. The old persistent spirit, which had beaten foul brood down to little more than a name only, was awakened, and everyone was on the alert. Thanks to the non-member who unconsciously imported the disease from the South, the association was granted a free hand, and there was no waiting until November 5th for a bonfire. Other outbreaks round the first one received corresponding treatment, but the following spring revealed the painful fact that the dreaded footing had been gained, and since then the battle has raged. It is estimated that up to date at least 1,000 stocks have been lost through the disease. Many members run no risks, but smilingly accept the consequences and employ the original and (at present) only known remedy. All the advertised cures have been tried, with results equal to pouring water on a duck's back. Lectures and demonstrations are annually given at different centres to educate members what to expect, and how to recognise the disease when found, but if any doubt exists a postcard to the secretary ensures an expert being quickly on the spot. Enclosed is a photograph of a few members present at a demonstration given at Kendal, in July, by Mr. Joseph Price. Unfortunately, many members having come long distances to the demonstration could not wait to be included in the photograph. A companion and equally successful demonstration was given by Mr. Price at Egremont in September.

BEE-KEEPERS AT KENDAL.

The same optimism cannot be maintained with "Isle of Wight" disease as in the case of foul brood, but the outlook is considerably brightened by a ray of hope which at last emanates from Whitehall Place. The writer has had considerable correspondence with the Board of Agriculture during the last seven months, and it is hoped that this association will, during next summer, be able to carry out a test under the Board's supervision—a test which will require a considerable number of stocks of bees in

an infected area being placed at the disposal of the Board, and the removal from the selected area of all suspected stocks and appliances not necessary in the test.

At the moment I am unable to give full details of the scheme, but may add that the Board, guided by its success in a small district, believes that it has at last found a satisfactory remedy for dealing with bees affected with the "Isle of Wight" disease, but until a test on a much larger scale has been carried out, it is not considered advisable to publish detailed information as to how it should be applied.

If carried out as at present outlined, and quite apart from the value of the bees and appliances to be provided, it looks like a £50 scheme, for which the money will have to be raised by voluntary subscriptions. The idea, however, is being well received in the North, and substantial donations are already promised, but as it is a heavy tax to be borne by one association, and considering that the venture is of equal interest and importance to all bee-keepers in the United Kingdom, no doubt many of the other county associations, and also the parent society, will be disposed to assist in raising the sum required. It will be interesting to learn what assistance may be expected from friends outside the counties of Cumberland and Westmorland. —JOHN STEEL, Hon. Sec. and Treasurer.

IMPORTANT NOTICE.

We shall be greatly obliged if those of our readers who have their JOURNAL by post from this office, and who wish to continue their subscription, will kindly let us have their order immediately on the expiration of their previous subscription —of which due notice will be given. Failing an order, we shall assume the paper is not required, and therefore discontinue sending it.

We are obliged to take this course, as we are unable to undertake the extra work and expense involved in sending out bills for small accounts, or to bear the losses entailed by sending out the JOURNAL after subscriptions have run out, the recipients failing to notify us that the paper is not required and refusing to pay for those received after the subscriptions had expired. We therefore respectfully notify our subscribers that the JOURNAL will not be sent unless the subscription is prepaid.

CORRESPONDENCE.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

EARLY WASPS.

[9225] On Thursday afternoon, Jan. 6th, I knocked down and killed a queen wasp. The day was wonderfully mild, thermometer standing at 54 deg. Fahr.

I thought it might be of interest to readers of the BEE JOURNAL.—W. E. HICKIN.

A NEW THEORY ON "ISLE OF WIGHT" DISEASE.

[9226] I am working late now on "munitions," this being the fashionable name for murderous articles of all sorts which are sent to "somewhere in France." After this experience I shall be able and capable of measuring bee-hives to one-thousandth of an inch, as the limit of variation we are allowed is two-thousandths. I tramped up all those stairs of yours once last year, but you were out. I wanted to discuss the "Isle of Wight" disease—some folks only want to cuss it. Now you must be aware that of late years the Isle of Wight has been a very favourite rendezvous for the supposed honeymooning Hun; they swarmed there. The English bees have evidently been feeding on some of this honey (not the moon), and hence the disease which has proved so disastrous to them is a pure cultivation in the digestive organs of the bacillus *Luna Hunny*, and being English bees it cannot be expected to nourish them, so they die! Of course you will add this explanation to your examination papers next year alongside the F.B. questions. The remedy is to clear out all the Huns from everywhere. —F. J. CRIBB, Sand Rock House, Retford.

[Several letters and articles are in print, but are unavoidably held over.]

Notices to Correspondents

Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. All questions must be accompanied by the sender's name and address, not necessarily for publication, but as a guarantee of good faith. There is no fee for answering questions.

C. D. (Chippenham).—(1) The method would be absolutely effectual. (2) They will be safe to use again, but as a precaution, spray them with a 5 per cent. solution of formalin. (3) Yes. (4) A solar extractor, or the "Gerster" wax extractor.

Suspected Disease.

H. EGGAR (Somerset).—Both samples of bees are affected with "Isle of Wight" disease. Medicate the candy, and spray alighting-board with one teaspoonful of Izal to a pint of water. May we allow "Marcia" to make an extract from your letter for the "Bee-keeping for Women" column in the RECORD?

R. H. E. (Salop), "BROADSTONE" (Norton), C. P. S. P. (High Wycombe), "ROSS-SHIRE," G. GARDINER (Hampstead), L. LARNER (Doncaster), W. J. LONG (Bucks), C. M'GINN (Tow Law).—The bees have died or are suffering from "Isle of Wight" disease.

J. M. PRICE (Kingsland).—The bees were suffering from "Isle of Wight" disease. In future please do not place bees inside a letter, but enclose them separately in a box—a tin box is best. Your letter was in a filthy mess, some of it not decipherable owing to the bees being crushed in the post.

M. WORTERS (Kettering). — "Isle of Wight" disease has caused the death of the bees. If you wish an answer by post see note at the head of this column.

Special Prepaid Advertisements

Two Words One Penny, minimum Sixpence.

Will advertisers please read these Rules carefully in order to save trouble, as they will in future be strictly adhered to.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not permissible at above rate, but will be inserted at 1d. per word as* **"Business"** *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of 3s. per ¼in., or 5s. per inch.*

PRIVATE ADVERTISEMENTS are only intended for readers having **Surplus Stock to** *dispose of.* **Driven bees, Nuclei,** *and* **Queens that are reared or imported for sale,** *are Trade Advertisements, and can only be accepted under trade terms.*

Advertisements must reach us NOT LATER than FIRST POST on TUESDAY MORNING for insertion in the "Journal" the same week.

Orders for three or more consecutive insertions in "The Bee Journal" entitle advertisers to one insertion in "The Bee-Keepers' Record" free of charge.

PRIVATE ADVERTISEMENTS.

WANTED.—An up-to-date steam wax extractor in perfect condition, cheap for cash; also a two year old White Wyandotte cock, must be good strain, cash, or exchange three pure Runner ducks with drake, just commenced laying, £1, on rail.—SCHOOLMASTER, Henstead, Suffolk.

SALE, BEE JOURNALS and RECORDS, 1911 to 1915, complete, good condition, 10s. 6d. the lot.—BARLOW, Bee-keeper, Newcastle, Staffs. v 14

TO CLEAR. Weed foundation, 14lbs. 2/- lb.; feeding-bottles, 2 doz. at 1/- each, complete; 6 doz. shallow frames, clean and healthy, 5/- doz.; rack, 1/3 extra.—BOX 56, BEE JOURNAL Office, 23, Bedford Street, W.C.

FOR sale, one hundredweight and a half of clover honey, good quality, price 60/- hundredweight.—J. DODSWORTH, School House Hill, Malton. v 8

FOR sale, extracted honey, in 14lb. tins, about 3 cwts., £3 10s. per cwt., sample 2d.—ARTHUR ADCOCK, Meldreth, Cambs. v 9

WANTED, cloth-bound copy "Bee-Keepers' Record," Vol. 7, year 1909.—HERROD-HEMPSALL, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

SOFT Bee Candy, medicated or plain, 1lb. glass top boxes, 7d., postage 5d.; 2lb., 1s. 2d., postage, 6d.; reduction for 7lb. and over.—Box 999, "B.B.J." Office, 23, Bedford-street, W.C.

WE have for sale a number of Bee Books, some very old; returnable list and prices will be sent for 1d. stamp.—MANAGER, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

BRITISH BEE-KEEPERS' ASSOCIATION.

The Council of the British Bee-Keepers' Association are anxious to obtain gifts of honey for the wounded soldiers in the London Hospital, where it is urgently needed both for food and medicinal purposes. They will, therefore, be grateful for gifts of same, no matter how small, from bee-keepers throughout the British Islands. It is unnecessary to explain our obligations to these brave fellows, who have sacrificed health and limbs for the sake of our country. Gifts should be sent addressed to the Secretary, B.B.K.A., 23, Bedford Street, Strand. The donors' names will be published in the "B.B.J."

W. HERROD-HEMPSALL,
Secretary.

HONEY FOR THE LONDON HOSPITAL.

Amount received	218½ lbs.
Mr. L. H. Smales	1 lb.
Total	219½ lbs.

A ROLL OF HONOUR.

Although bee-keeping is considered a minor pursuit, we venture to say that it has provided more fighting men than the usual average of any industry. To place on record the part the members of our craft have played in the present war we propose to make a "Roll of Honour," and shall be pleased if our readers will forward us the **Names** and **Addresses**, together with the **Regiment** and **Rank**, of any bee-keeper serving his King and Country at home or abroad; also if killed or wounded.

We print a further list of names to those sent in, and shall be pleased to have other names as soon as possible.

Dr. J. McGlasham, Newhaven—R.A.M.C.

Pte. Alastair G. Rait, The Croft, Hyke Forres, Morayshire — R.A.M.C. (10th Casualty Clearing Station, B.E.F.).

Pte. W. Medlock, Edworth, Baldock, Herts.—21st Siege Battery, R.G.A.

ANCIENT BEE LITERATURE.

I.—Gods and Bees.

In all ages religion has been a question of faith rather than of sight. In this twentieth century we still see through a glass darkly. It is therefore no marvel that in ancient times our progenitors amassed an accumulation of myths, legends, fables, and idylls embraced in the term "mythology." Many of these are beautiful in conception and elevating in their tendency. Especially is "The Story of the Gods" one well worth telling, but here and now we are concerned in it only in its relation to bees. The warp and woof of the history of these gods is woven round such marvellous agents as the seasons, with their transcendental revolutionary results; the great forces of Nature, such as thunder and lightning, earthquakes; the no less magic-working still small voices that produce leaf and flower, as well as the self-evident forces of sun, moon, and stars. These were personified, and hence came the gods of old.

The food and drink of these gods consisted of nectar and ambrosia—shall we say honey and mead, or some other liquid produced from Nature's only sweet? Yearly, at stated seasons, the feasts or festivals of the gods were held, and then no part of the "menu" was more highly prized than honey. In the offerings and sacrifices offered them honey held an honoured place.

Legend tells us that bees were first heard of in the Island of Candia, or Crete, where Rhea (the Earth-mother) hid her son Zeus (the Father of the Gods) in a cave to save him from his cruel and unnatural father (Kronos), who previously had devoured all his other children. In this cave a colony of bees had taken up their home, and the infant god had his life preserved by their honey and the milk from a goat. For centuries the inhabitants of Crete celebrated Zeus's birthday, and honey found an honoured place in the good things provided for the feast. A fierce and resentful race of bees dwelt on Mount Ida, and Zeus only could control them; so he watched over them as a guardian, grateful for the services they had performed for him in his infancy. Once, we are told, a band of daring men clad in complete armour raided their home, determined to participate in the luscious delicacy hitherto held as sacred, but the ever-watchful god deprived them of their vaunted armour and converted them into birds. Zeus conferred on these particular bees three great and valuable gifts: (1) The beautiful yellow bands so distinctive of Italians in our day; (2) the art of storing their honey in waxen cells

to preserve it for their sustenance in winter; (3) the power to form a community governed by such wise laws that there is no equal to it in the whole world.

Ancient works of art picture Zeus accompanied in his journeyings by bees, either flying round him or clustered on the cornucopia which he holds in his hand. The sacred tree, the oak, was dedicated to this god, and he gifted to the bees as their perquisite the famous honeydew, so highly valued by the ancients, which is so often found on this tree in such superabundance in our day that at times it drips nectar. As an ancient writer poetically and graphically describes it, "Zeus rains honey."

It is interesting to know that the bees, descendants of Zeus's bees no doubt, inhabiting Mount Ida in Crete, are still credited with fierce tempers and are said to be determined stingers; possibly the well-known Cyprians are of the same race. If Columella's statement, or surmise, that these Cretan bees of Zeus were "bred from hornets and the sun" is correct, it is no wonder that they have been credited with being of an implacable temper. Perhaps the god conferred this means of defence on them in order that others should not attempt to deprive them of their rights or himself of his rights!

Bacchus, the God of Wine, like Zeus, his father, was partly brought up on honey in his infancy; and he, too, was a good friend of the bees. On one of his great Bacchanalian journeys, accompanied by his train of nymphs, satyrs, and attendants, in or near that part of Greece lately become so well known to us as the seat of war, the sweet music of his train charmed the birds and bees, the latter of whom followed and clustered near. The god, grieving that they should waste their energy in semi-profitless flight, shut them up in a hollow tree, where they settled down into a well-organised commonwealth, blessed in their communal life and blessing mankind with their sweets. The story as told by Ovid is a charming one. Bacchus and his train dearly loved to feast on the luscious sweet. He was, indeed, worshipped as the God of Sweetness, or "the honey god"; and as the dispenser of flowers over the sunny meadows he became known as the "Father of the Trees." At the great feasts held in his honour, real Bacchanalia, wax candles, wax wreaths, and honey were indispensable. They had honey in comb and also extracted honey, as we are told that Makris had taught him the art of pressing or extracting honey from the comb; the record does not mention an extractor, it is needless to say.

One of Bacchus's most constant and indispensable friends was the wise Silenus, he of the "bare bald pate." He was the son of Pan, a sybarite, and dearly loved honey. The following humorous story is told of him. Knowing where the bees were located, he one day rode out on his donkey, determined to have a feast of the honey. As the "hollow" home of the bees was out of his reach—it seems he was short of stature, but extra stout; somebody has likened him to Sir John Falstaff—he stood on his donkey's back to reach the prize he coveted so much. The enraged bees flew out at himself and his steed, when he was brought ingloriously to earth, the bees paying particular attention to the bald pate. Silenus was rather noted for his wisdom, and at once applied the first sting cure we read of, *viz.*, moist earth. This and the satyrs who came to his assistance saved his life.

The poets are fond of singing in praise of Bacchus. Ovid in his "Ode to Bacchus" says:—

"Fountains of wine shall pour along,
And melting from the hollow tree,
The golden treasure of the bee."

Euripides sings thus of himself and his jolly train:—

"And as they pass through every plain
Flows milk, flows wine, the nectar'd
honey flows."

"M."

(To be continued.)

CRAYFORD AND DISTRICT BEE-KEEPERS' ASSOCIATION.

Secretaries:

Mr. J. M. Bates, Slade Green School, Erith.

Mr. G. W. Judge, "Barrowdene," Shepherds Lane, Dartford.

FORTHCOMING MEETINGS AND LECTURES.

February 7th, 1916.—Monday. Annual Meeting at St. Paulinus Hall, Crayford, 8 p.m.

Agenda.

Minutes of Annual Meeting, March 22nd, 1915.
Report and Balance Sheet for 1915
Experts' Report for 1915.
Report on Restocking Scheme for 1915.
Delegates' Report.
Election of Officers.
Other business.

At the conclusion of the above business Mr. V. E. Shaw will give a short lecture on "The Scientific Aspect in Bee-keeping," which promises to be of much interest.

March 23rd, 1916.—Thursday (subject to alteration of date): Lantern lecture

at Christ Church Parish Hall, Woodside Road, Sidcup, by Mr. W. Herrod-Hempsall, F.E.S., Secretary and Lecturer to the British Bee-keepers' Association. Subject: "The Pleasure and Profit of Bee-keeping."

Chairman: Alfred Dewey, Esq., J.P.

Members are cordially invited to bring friends who are (or likely to become) interested in bee-keeping.

Chair will be taken at 8 p.m.

May 27th, 1916.—Saturday afternoon, at New Eltham, 4 p.m. Admission by *ticket only*.

A special meeting has been arranged to take place at the Apiary of Mr. V. E. Shaw (New Eltham) to see some practical queen-rearing methods. Owing to the limited space in the apiary a large muster cannot be accommodated, but those desirous of attending should apply in advance to Mr. Judge for admission tickets. As many members and friends as possible will be accommodated, but in order to avoid disappointment please apply in good time.

Further notices regarding the two latter meetings will be sent out subsequently.

NOTICE.

As many of our members have joined H.M. Forces, or are engaged in munition work, the Council desire to offer the services of their Hon. Experts and other volunteer helpers to assist those who will be temporarily unable to attend to their apiaries during the coming summer.

Members who desire assistance should communicate with Mr. G. W. Judge, "Barrowdene," Shepherds Lane, Dartford, on the subject.

EXPERIENCES WITH "ISLE OF WIGHT" DISEASE.

By J. Price.

(*Continued from page* 460, *Vol.* 43.)

For over ten years the epidemic among bees known by the name of "Isle of Wight" disease has been ravaging apiaries all over the land, and whether this disease is an old one under a new name or not the fact remains that it has brought bee-keeping into a very low state. Bee-keepers, good, bad or indifferent, are all losing their stocks, associations are being deprived of their members, the whole of Great Britain is being denuded of valuable insects that carry on a great work, whether looked at from the point of view of a honey producer or from the aspect of a fruit-grower and farmer.

Why should this state of things exist? Who is to blame for this great loss of bee life, and what are our scientists and great bee-keepers doing to alleviate this trouble? These are questions that I am being continually asked when on tour, and they are certainly more easily asked than answered.

Before giving my views on these questions perhaps it will be of interest to relate some of the many notions that are still held by bee-keepers as to the cause.

Some people still claim that the spraying of fruit trees, charlock, potatoes, tarring of roads, diseased pollen, deteriorated Black bees, lowered vitality by sugar-feeding and in-breeding are the causes, whilst there are others who maintain that bee experts spread it, and that chemical and artificial manures produce it.

In fact, the many things that some folk hold as the cause seem endless, and would soon fill a volume. Suffice it to say that many of the above are ridiculous ideas to hold, because if any of these things cause it, then all bees that are in close proximity to any of the above ought to contract the disease. This, of course, is not the case, because many of the things mentioned were used long before "Isle of Wight" bee disease was known.

To take two examples from my own experience, *i.e.*, charlock spraying and sugar-feeding. The former has been carried on close to my apiary for many years until the last two, whilst the latter I have practised for twenty years with good results. Only this last year have my bees gone into winter quarters on all natural stores, and only this last autumn have I noticed the first signs of disease in my stocks.

No, we must look further afield than this for the cause, and the difficulty of finding a remedy. In my own, as in all cases, the disease must be imported into the district, and then, after a time, it spreads and attacks other apiaries.

There is no doubt in my mind but that this disease is the same as "May Pest," known to be on the Continent, and described by Dr. Zander long before we had it here. It is possible that our climatic conditions may have slightly altered it, and that here it is more virulent.

As to who is to blame, this is a still more difficult question and one that requires caution in answering. However, I am convinced that many dealers in bees are to blame, although probably many were unconscious that they were spreading disease at the time.

Want of legislation has certainly been the indirect cause of this dreadful disease spreading, but there may be some cor-

solation in the fact that since its advent Foul Brood has been eclipsed.

What we want to know now is, "What is being done by our scientists and great bee-men to arrest its progress?" We know that some time since the Government appointed scientists to investigate it, but there seems to be some doubt now whether the war has stopped this work from being carried on or not.

In my opinion, up to the present time, science and practice have not been working so closely together as they should have done to bring about good results.

We naturally look to the Board of Agriculture for carrying out scientific investigation and giving the result to the public free; we also look to the B.B.K.A. for testing in a practical way any remedy.

Of the work of the latter I was pleased to see a reply given in the BRITISH BEE JOURNAL on page 458, that the Association's apiary at Swanley was still clear since re-stocking some years ago. This says much for the methods adopted by the expert, Mr. Wm. Herrod-Hempsall.

(*To be continued.*)

DISEASES, PLANTS, AND SOILS.

By Tarlton-Rayment, Briagolong, Gippsland, Victoria, Australia,

Author of "A Treatise on the Bees and Nectariferous Plants of Australasia."

It is now generally recognised that the adverse climatical condition in early spring is *not* the chief factor governing the rapid depopulation of colonies by—what some apiarists have appropriately termed—"The Disappearing Trick." From the suffering apiarist's standpoint, a better descriptive title could not be found in the English language to distinguish this extraordinary phenomenon.

However, the writer will endeavour to place before your readers the results of his observations and experiments, which tend to show that the disappearance of the insects is not a disease—in the generally accepted sense of the word—but simply an abnormal condition, superinduced by the absence of certain vitally essential elements in the pollen, or honey—perhaps both—which is gathered as food during the season. That the presence of tannic or other acid in the nectar may be a contributing cause is more than probable, but this aspect has not been closely examined, though the high percentage of this acid in some Australian honey certainly calls for investigation into its effects upon bee life. There are certain difficulties to overcome before the biologist can undertake the study. The rapidity—almost beyond belief—with which the climax is reached, together with the absence of dead specimens from the affected hives, will greatly militate against scientific research into the subject.

It will be at once conceded, by all observant apiculturists who have experienced a visitation of this class, that the following account by a prominent Victorian bee-farmer is, with the exception of the swarming-out, a splendid description of a truly typical case of "Disappearing Trick." He says: "The insects' line of flight to the forest of Eucalypts was over our residence, and on bright, sunny days the roar of passing bees dominated the surroundings. It had been so for a number of days, as the trees—'Red-box' (*Eucalyptus polyanthemos*)—were yielding a strong flow of pale nectar. The face of the combs was showing a white tinge, and new pollen from the 'Wattles' (*Acacia dealbata*) just making its appearance in the hives. The apiary looked prosperous and contented.

"One morning—it was clear and warm—we missed the usual humming, and, although surprised, felt sure that the flight had been diverted, from some cause or another, to a different point of the compass. Curious, but not apprehensive, we visited the yard, and at once perceived that while a number of bees left the entrances none returned. The workers did not leave the hives with that sudden 'shoot' that betokens vim and thriftiness, but delayed on the bottom board in an indecisive manner before taking wing. They seemed reluctant to leave. Alarmed, we opened hive after hive to find only full combs of honey, sealed and unsealed. Rarely, there was a small cluster of bees, together with a queen, which later on swarmed out and hung promiscuously about the yard. We did not use any curative measures, because the whole thing was so sudden and unexpected."

The writer elicited these additional facts. The yard contained nearly two hundred colonies, of which number only some half-dozen remained normal and apparently unaffected. Some of the colonies absolutely devoid of bees contained a few cells of sealed and unsealed larvæ. The queens were all reared from the same stock, most of them sisters to the survivors. The losses occurred so early in the season that many queens had not commenced their oviparous duties, while some hives showed a few eggs only.

The foregoing is a splendid description, and in *all* cases where the writer interviewed apiarists who have lost bees with "D.T." their accounts, with the exception of the swarming-out, differed in no particular from the above. We may therefore with reasonable safety discard and reject that feature as due to some extraneous cause apart from the subject under review.

A study of the tabulated notes disclosed the important fact that all the apiaries affected were located on soil of sandy, gravelly, or rocky character, carrying a strong growth of eucalypts, and strongly acid in reaction. On using the caustic potash test for humus and nitrogen the resulting yellowness proved the poor, depleted nature of the soils. Observations show that along with the periodical depopulation of the bee hives cattle grazing on these areas suffer greatly from impaction or "cripples."

(To be continued.)

[We have received inquiries about a book written by Mr. Tarlton-Rayment. This will be published shortly, and the title will be "Money in Bees in Australia." The author proposes to give full details of every subject that will be required to be dealt with on an Australasian bee-farm. The concluding section will be devoted to the honey and pollen producing indigenous flora. The book will contain a large number of diagrams drawn by the author, and other interesting and practical illustrations. Announcement of publication, price, etc., will be made in these pages at a later date.]

(*Continued from page* 299, *Vol.* 43.)

Queens may also be reared in a stock which is preparing to supersede its queen through age or any other cause. This is indicated by the presence of good normal queen cells when the colony is not numerous enough for swarming. It is rarely that this method can be adopted, for the same reason that the poultry-keeper is practically compelled to use an incubator for hatching chickens, *i.e.*, the hens are not broody when wanted, and when not wanted nearly all will desire to sit. So with the bee-keeper, when he does not want to rear queens several stocks may be discovered preparing to supersede their queen, while when queens are required not one will be showing this disposition.

If such a stock is present it may be preserved in that condition until all the cells required have been obtained. This is done by removing the queen cells before the princesses are due to emerge, and adding periodically a comb of hatching brood from a strong stock, so that the population is kept numerous enough to maintain sufficient warmth for incubation purposes. If this is not done they will dwindle and die out on account of the failing reproductive powers of the mother.

Supersedure also accounts for the unusual occurrence of two queens being present in one stock, which is often a puzzle to the beginner. When supersedure is taking place it is no unusual thing for the old queen to be allowed to remain in the hive for some considerable time after the young mother has commenced to lay. They agree and carry out their maternal duties together.

It will also be found that the larvæ in the queen cells, either natural or artificial, built by such a colony are supplied with an abnormal quantity of royal jelly so that proper nutrition is assured.

Years ago, before the introduction of movable cell cups, I obtained queen cells in a stock with a laying queen by using a queen excluder division. I

discovered how to do this through the injudicious manipulation by a student of a stock that was being built up. Too many new frames fitted with foundation were introduced at one time, with the result that a couple of combs at the back of the hive containing brood were isolated from the others by the new frames, so that the queen did not pass over the foundation to visit them. To my surprise several splendid queen cells were built upon these combs. The idea occurred to me that I might obtain queen cells in any stock by preventing the queen from getting to a couple of combs by means of a queen excluder division. Practice proved my theory correct, and ever after I obtained queen cells by this method. This was long before I did any literary work, so that at that time the method was known only to my students and myself. In the meantime movable cell cups were brought into use, and practically the same method of obtaining queens in these was practised by Mr. F. W. L. Sladen, and he gave an illustrated description of it in the BRITISH BEE JOURNAL in the spring of 1904. I will give a condensed description of this method, which, by the courtesy of Mr. Sladen, I am able to illustrate by a few of his original blocks. Those who wish to have fuller particulars should purchase his admirable book, "Queen Rearing in England," which costs eighteenpence, and which has now reached its second edition.

(*To be continued.*)

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

ORDERING APPLIANCES.

[9227] We have received the following letter signed by nearly all the principal appliance manufacturers. Our readers will do well to give it their earnest consideration:—

DEAR SIRS,—May we be permitted to draw attention through your valuable columns to the danger of delay in the delivery of appliances during the coming season, owing to the congested state of the traffic on railways.

We would urge on bee-keepers generally the importance of ordering the appliances they will require as soon as they can, and not waiting till they are actually in need of them.

Though handicapped by the shortage of labour we shall endeavour, as in the past, to get orders despatched promptly, but fear that if our suggestion is not followed some disappointment will probably result. This suggestion applies both to those who buy in their own towns and to those who buy from a distance.

HINTS ON QUEEN INTRODUCTION.

MY OWN EXPERIENCE.

[9228] I know many queens that are sent out by breeders are killed through bees not being in a proper state to receive them. Time of the season, strain of bees, and different methods are to be considered; pure Italian bees accept queens easier than do natives or hybrids, bees accept queens of their own race better than foreign ones. In late summer and autumn a little more precaution should be taken than in the height of summer. I have had an Italian queen accepted by natives until she started laying; she was then deposed and a young queen raised from her eggs, showing how they disliked their foreign mother. I am pleased to say this is not the rule, but an exception. A mistake many bee-keepers make on finding a stock without young brood or eggs, sometimes no brood at all, is to think the bees are queenless and send for a queen, only to be killed by a virgin raised in the place of the old mother who has been deposed through old age or some other cause. Of course, some can tell by the bees whether they have a queen or not, but there are those that cannot. The old test should be used, that is a comb of brood and eggs, and if they start queen cells it proves they have no queen and will easily take to one. There is no surer way to prepare bees to accept a strange queen than to go to the stock, take away the old queen or the one to be disposed of. Nine days after—not longer—destroy every queen cell, shake most of the bees from the combs to make sure you do not miss one. Now they are hopelessly queenless, and

will accept a queen by any of the different methods or directions given with the queen sent. This is slow, but sure. Another sure way: procure a box of any sort, candle-box, soap box, no matter what so that it has a lid and is well ventilated, and with a hole closed by means of a cork. When ready go to a strong stock on a fine morning when most of the bees are in the fields, find the queen, set her and the comb on which you find her to one side; now shake quickly into the prepared box two to five combs of bees, shut the lid and take to some cool place, replace the comb and queen and cover up as before. In about six hours take out the cork and run in your queen, fertile or virgin. At sundown hive as a natural swarm, give one or more combs containing food, but no brood, and see they do not run short of food; a sponge saturated with thin honey or syrup should be tied in the confining box, or some other arrangement made to supply food. The pipe cover cage, or one on the same principle, is a good way to introduce queens, as the queen and bees can be watched, and if bees behave kindly to her she can be left with them; if not, she can be caged again until they do, which takes from twenty-four hours to six days, according to the season. There are many other ways, but none are sure unless bees are in a proper queenless state.—O. K.

ARE HEATHS FOUND IN AMERICA?

[9229] Mr. D. M. Macdonald, Banff, repeats this question on page 237, of the BRITISH BEE JOURNAL of July 8th, 1915, which Mr. J. A. Heberle previously asked in *Gleanings*, May 1st, 1915, page 379, and I do not think it has yet been answered.

Calluna vulgaris has been found in Nova Scotia, Newfoundland, and some of the New England States of America, where is it supposed to have been introduced from Europe. Small patches of *Erica cinerea* and *E. tetralix* have also been found on Nantucket Island, Massachusetts. With these exceptions heather may be said to be non-existent on the American continent.

In British Columbia we have three species of false heather—*Phyllodoce empetriformis* (red), *P. intermedius* (pink), and *P. glanduliflorus* (white), which belong to same order as the true heathers, *Ericacea*. They may be easily mistaken for the bell heathers of Great Britain, except to the close observer. The red is the most common, and is very abundant in the mountains. They all grow at high altitudes, generally not under 5,000 feet. As far as I am aware it is not at present known whether the false heathers would yield nectar. Even so, however, it would not be practicable, in the absence of roads or trails, to move hives up the steep mountain sides to the alpine meadows where the false heather abounds. At such altitudes also the snow would be absent so short a time as to make it not worth the trouble on that account.—W. J. SHEPPARD, Nelson, British Columbia.

EXPERIENCES WITH "ISLE OF WIGHT" DISEASE.

[9230] I gather many would like to begin bee-keeping after the war if they get a fair chance. But when one is surrounded with hives left empty of bees—bees having died with "Isle of Wight" disease and no effort made to clean out old combs, etc., as many elderly people don't intend starting again—I say there is little encouragement to ask any person to keep bees. I lost all my bees in 1914, nineteen stocks; but I wish to start again this summer. Will you kindly request readers of the JOURNAL to report in its columns what success they have had and how best to keep bees alive in affected districts? Are Dutch bees suitable for heather districts, and do they live for a year or two in affected districts?

We are grateful for all that is being done to find a cure, and I trust any person knowing a cure won't keep it back altogether for the sake of the L.S.D.

Many of us in the Highlands of Scotland are partly dependent on our bees, and, having lost all our stocks, some of us are willing to begin again, only we must be careful how we go about it.

We are on the land. I have markets for honey, and it seems sad to think "Isle of Wight" disease is allowed to spread all over Scotland. Is our Government blind to all this? We hear much of the new industries to be after the war. What about us in the Highlands, depending on the honey industry, and without legislation and our Government refusing to give it? Really, it is beyond words to express how one feels about the situation. Open the pages of the JOURNAL for discussion, and if possible find a cure for "Isle of Wight" disease, or the Government. Wishing you success in your efforts.—JOHN PATON.

THE BUSINESS OF HONEY PRODUCTION.

[9231] The articles on honey production and sales are very interesting and instructive, and should bring out many useful suggestions.

To my mind, the grading and packing is of first importance, as I find from experience that a good light-coloured honey well packed in clean screw-capped jars always commands a sale.

The same applies to sections; if carefully graded, a good price and sale is assured in most large towns, and once a trade for good quality honey has been established it is easy to clear stocks.

I cannot agree to Mr. Smallwood's suggestion for a market stall sale, as comparatively few honey buyers visit the markets. But the idea of a central honey broker is well worth considering, as many village folk have no chance of knowing buyers and many have no idea of grading honey or products.

Some ask the same price for dark strong honey as others do for clear bright fine-flavoured honey; this, of course, hinders sales. If bee-keepers who have no opportunity of selling their honey themselves would be willing to pass it to the central broker or depôt for sale at what it was worth, much good business would result.

This is proved by my own experience this last season, as not only have I been able to sell all I could produce, but much more which I have taken and sold for friends in the district.

The future reveals a further difficulty, viz.: Where are we to get our screw-cap jars and our tins to pack honey in? So far the supplies have held out, but now, with a famine in glass and tin, what shall we do?

If any of your readers are over-stocked now would be a good time to clear either jars or tins.

Looking forward to more interesting remarks on this topic.—R. H. Baynes.

[9232] In answer to the articles by Mr. Smallwood in British Bee Journal *re* marketing honey, I cannot see why there should be any difficulty about selling our honey, and as much of it as we can produce. If producers of honey would do as I have done for these last four years they would find they would have no difficulty in getting rid of all their stock—large or small.

In the first place I took a standing in front of the door in Welshpool Market Hall; it is in a beautiful position; when the sun shines it shows my stand off to perfection—everyone who has seen it says to look at it would make anybody want to eat honey. I put the stand up similar to a trophy of honey; just three tiers will do, or two could be stood together if preferred. I always put the honey up scrupulously clear, with clean caps and wads, and wax sections cleaned, glazed, and set out as tastily as possible with flowers, some wild ones generally, or autumn leaves and evergreens at Christmas time. When I first began I had a number of inquirers wanting to know how the different colours were got, so I decided to sell bee appliances also. I have everything there except a hive, and, unfortunately, I have no room to stand a hive or should do so, but with the help of a trade catalogue and nearly all other appliances we make it very interesting to would-be bee-keepers; in fact, they keep us going answering questions all day long, and by that means we have got a good many more to join the craft of bee-keeping. The majority of them are wild to begin, but we cannot drive it in that bees must be fed for the winter, consequently they come with the same old tale, "My bees have died again." "Well, did you feed them?" Of course not, and there they are. They are as wild to make their own hives to begin (in a style, of course, but it does for them to begin). Some of them, the persevering ones, have been very lucky, and they come to us to buy their honey, which sometimes we do, and resell to the poultry and egg dealers at a profit; but we always keep our own honey for our own stand—by so doing we know where it is obtained, also can guarantee it as our own produce. Of course, one day in a week is not much to do, but if anybody could follow a market up every weekday a very good trade could be worked up. Of course, I cannot be with the stand myself; my wife or daughter has been doing that, and they both say how interesting the work is—and profitable, too. My wife has also attended Oswestry Market, but it really needs a man if the different markets are to be followed up. Honey in boxes is very heavy stuff to handle. I shall be pleased if my experience is of any use to fellow-bee-keepers, and only hope they may find it as congenial as we have done.—F. C. Holmes.

COMB-FOUNDATION IN RELATION TO BEE DISEASES.

[9233] Replying to R. Steele and Brodie (9221, January 13th, page 14), I thank them for that letter, first, because it is money to me, as they know these last few years I have sent to them for a few pounds of Dadant's foundation, not because bees worked it better than British weed, but because I believed the American people were more careful against using infected wax for their foundation. Dadant's foundation is more expensive than British. There are two kinds of British-made foundation. Most of the agents (local) sell the cheap kind, because there is more to be made out of it, which

I still think is not safe. Rather than run any risk I have let a few of my friends have a pound or two at a loss to me. If R. Steele and Brodie are correct, and all foundation is safe, there is no advantage in Dadant's foundation. Now, coming more to the point of destroying foul brood germs by heat I will take Prof. C. F. Hodge, in "Gleanings." Dead spots which have not been heated up to 212 may remain very much alive as to germs and reinfect the whole mass. Allowance must also be made for altitude above sea-level. It makes several degrees variation whether boiled on the coast or in the mountains, and this makes a difference in killing microbes. It is well known that, in the spore state, it is hard to kill many kinds of bacilli by boiling; the practice in laboratories is this: to boil, say, fifteen minutes twice, or even three times, on successive days. Boiling the first time kills all the growing bacilli and starts the spores sprouting; the next day they have not time to develop and form spores again, so that the second boiling kills everything that had started. But since some of the spores are slower in germinating than others, and to make assurance doubly sure, it is the common practice in bacteriological laboratories to boil for a few minutes on three successive days. Since *Bacillus alvei* does form spores the most rigorous treatment should be adopted. I would not risk anything short of boiling for fifteen minutes with thorough stirring on three successive days.

I should like to know where foul brood comes from, apart from infected hives. Is there not some wild insect or plant source? (I think we may ask the same of the "Isle of Wight" disease.) If Messrs. Steele and Brodie read my letter again they will find I do not accuse comb foundation of being a fertile source for producing disease; at the same time I am not satisfied. They also say, "Not one authentic case of transmission of disease has ever been proved against comb foundation." Just so; thousands of stocks of bees have died from the "Isle of Wight" disease that were quite isolated; no foreign matter, such as outside bees, etc., no bees for miles, yet they have died of this disease. Like Prof. C. F. Hodge, I would like to know where it comes from.

Dr. Miller, Mr. Genonceant, Dr. W. R. Howard, and J. J. McKenzie support Prof. C. F. Hodge that fifteen minutes' boiling is unsafe. Now, sir, a friend of mine, not fifty miles from London, lost the whole of his apiary—over 100 stocks; he rendered the combs down, there was over 1cwt. of wax that was sold for comb foundation. Would even my good friend, Mr. Hayes, care for that foundation if he knew it? Now, there are two kinds of foundation, Weed, and what is known as the old-fashioned foundation, and there is a difference in the price. It is the latter that is mostly sold in local shops, for the extra bit of profit that can be made out of it. Are both of these comb foundations sterilised? If so, why the difference in price? Would it not be better to have only one kind of foundation—the best? Is the old-fashioned foundation as safe as Weed? If many of your readers are satisfied that foundation has no danger, why go back to straw skeps and cause the unnecessary work to the bees? There cannot be any other point; but they are not satisfied with our foundation. I am satisfied Roots Co. would not have taken this 1cwt. of foul broody wax for foundation even if they had known of it. — J. PEARMAN, Penny Long Lane, Derby.

Notices to Correspondents

Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. All questions must be accompanied by the sender's name and address, not necessarily for publication, but as a guarantee of good faith. There is no fee for answering questions.

NOVICE (Salop).—*Medicating with Izal.*—Use half-teaspoonful to each 10 lb. of sugar.

L. M. C. M. (Kent).—*Extracted Honey, or Sections?*—It depends which you have the most demand for. It is easier to prevent bees from swarming when working for extracted honey, and a larger quantity is usually secured. If you have a good demand for extracted honey we should advise you to work for that. A "Guinea" or similar extractor would suit you; one with a gearing is well worth the extra money.

T. O. D. (Wellingborough).—(1) This will depend on the strength of the colony. Make up to ten combs if necessary, and when uniting at the end of the season take away the worst of them. (2) About

twelve hours before you intend inserting the queen cells. (3) Yes.

NOVICE (Yorkshire). — (1) Granulated sugar is suitable (see our advertisement of sugar. (2) The best plan is to have a feed-hole cut in the quilt and place the candy over it. Use a little smoke if necessary. (3) It is suitable. Pitch-pine (if you can get it) or deal. (4) Hive the bees on six or eight frames. The next day remove those not covered by the bees and close up with the division board. Add the other frames as needed. If the ten combs are built out you may remove two or three in order to crowd the bees into the supers when moving to the heather. (5) You may use a twelve-frame hive, but you can always double the brood box if necessary by means of either standard or shallow combs with worker cells. (6) Yes. (7) We prefer to leave them all close up. (8) About 2s. per lb.

E. H. P. (Ealing).—If there are rats or mice about, it is quite likely that under those conditions they will make an attempt on the hives.

Suspected Disease.

P. JAMES (Rad.), MISS E. KENTISH (Dorset), J. P. C. (Essex).—It is "Isle of Wight" disease.

REV. B. HALE (Cumberland).—We do not find disease in the bees sent. No doubt the mice have caused the loss.

Special Prepaid Advertisements

Two Words One Penny, minimum Sixpence.
Will aavertisers please read these Rules carefully in order to save trouble, as they will in future be strictly adhered to.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not permissible at above rate, but will be inserted at 1d. per word as* **"Business"** *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of 3s. per ½in., or 5s. per inch.*

PRIVATE ADVERTISEMENTS are only intended for readers having **Surplus Stock to** *dispose of.* **Driven bees, Nuclei,** *and* **Queens that are reared or imported for sale,** *are Trade Advertisements, and can only be accepted under trade terms.*

Advertisements must reach us NOT LATER than FIRST POST on TUESDAY MORNING for insertion in the "Journal" the same week.

Orders for three or more consecutive insertions in "The Bee Journal" entitle advertisers to one insertion in "The Bee-Keepers' Record" free of charge.

PRIVATE ADVERTISEMENTS.

WANTED, healthy stocks of bees, on frames preferred, April delivery.—COOPER, Thorley, Isle of Wight. v 16

FOR SALE, five stocks of bees on ten standard frames, with stores, free from disease, and in good strong hives, free on rail, 25s. each.—H. ROGERS, Hathcrop, near Fairford, Glos. v 20

BEE HIVES, various makes, good condition, 2s. 6d. each; also twelve W.B.C. lifts, 1s. each.—MRS. OWEN, Risby, Bury St. Edmunds. v 18

120 LBS. run honey for £4, cash or deposit, carriage forward; sample 4d.—WEAVING, Burford-road, Chipping Norton. v 17

TO CLEAR. Weed foundation, 14lbs. 2/- lb.; feeding-bottles, 2 doz. at 1/- each, complete; 6 doz. shallow frames, clean and healthy, 5/- doz.; rack, 1/3 extra.—BOX 56, BEE JOURNAL Office, 23, Bedford Street, W.C.

WANTED, cloth-bound copy "Bee-Keepers' Record." Vol. 7, year 1889.—HERROD-HEMPSALL, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

SOFT Bee Candy, medicated or plain, 1lb. glass top boxes, 7d., postage 5d.; 2lb., 1s. 2d., postage, 6d.; reduction for 7lb. and over.—Box 999, "B.B.J." Office, 23, Bedford-street, W.C.

WE have for sale a number of Bee Books, some very old; returnable list and prices will be sent for 1d. stamp.—MANAGER, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WELSH honey for sale, in bulk, all extracted and good.—JAMES, Brynafon, Newcastle Emlyn. v 15

WANTED, good lantern slides on poultry-keeping.—Price and particulars to CHANTICLEER, "B.B.J." Office, 23, Bedford-street, Strand, London, W.C.

FOR SALE, ½ plate Koilos camera, with Goerz Dopp anastigmat *f*/125 lens, can be used either for hand or stand work, twelve single dark slides and film pack carrier. The whole packs in stout block leather sling case, 9in. long, 6in. deep, and 2½in. wide; also light brass telescopic tripod, in leather sling case, all in excellent condition, and used by me to take the illustrations in "Helpful Hints" and "Continental Wanderings." The outfit for sale in one lot for £6; reason for selling have bought a Reflex. A splendid opportunity for anyone wanting a good reliable camera. Will send on approval; Deposit.—HERROD, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED, the following: Cloth editions "British Bee-Keepers' Guide Book," 3rd 4th, 5th.—HERROD, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

FOR SALE, a honey-producing and selling business; a modern apiary, consisting of 100 W.B.C. and combination hives, with lifts and two racks drawn out shallow frames and empty section racks, all exceptionally well made, and majority having oak legs; at home and out apiaries; also four wood houses. Full and complete instructions given, from hiving swarms to the best methods packing and sending sections safely by rail.—"MIDLANDS," "B.B.J." Office, 23, Bedford-street, W.C. v 1

BUSINESS ADVERTISEMENTS.

COLONIAL HONEY.—LEONARD HALL & CO., 132, Queen Victoria-street, London, honey importers and packers for H.M. War Dept., the leading stores, &c.

COLONIAL and Californian honey, 50s. to 65s. cwt., carriage paid; cash. Sample, 3d.—ROWE, 28a, Moy-road, Cardiff. v 90

COMFORTABLE APARTMENTS for Brother Bee-keepers visiting Douglas. Terms: Tea, bed, and breakfast, 3s. 6d.; or full board, 5s. per day.—HORSLEY'S, Merridale House, top of Castle Drive, Douglas, Isle of Man.

Editorial

BRITISH BEE-KEEPERS' ASSOCIATION.

The Council of the British Bee-Keepers' Association are anxious to obtain gifts of honey for the wounded soldiers in the London Hospital, where it is urgently needed both for food and medicinal purposes. They will, therefore, be grateful for gifts of same, no matter how small, from bee-keepers throughout the British Islands. It is unnecessary to explain our obligations to these brave fellows, who have sacrificed health and limbs for the sake of our country. Gifts should be sent addressed to the Secretary, B.B.K.A., 23, Bedford Street, Strand. The donors' names will be published in the "B.B.J."

W. HERROD-HEMPSALL,
Secretary.

HONEY FOR THE LONDON HOSPITAL.

Amount received	219½ lbs.
Mr. W. Thorne	2 lbs.
Total	221½ lbs.

A ROLL OF HONOUR.

Although bee-keeping is considered a minor pursuit, we venture to say that it has provided more fighting men than the usual average of any industry. To place on record the part the members of our craft have played in the present war we propose to make a "Roll of Honour," and shall be pleased if our readers will forward us the **Names** and **Addresses**, together with the **Regiment** and **Rank**, of any bee-keeper serving his King and Country at home or abroad; also if killed or wounded.

We print a further list of names to those sent in, and shall be pleased to have other names as soon as possible.

Lieut. G. M. R. Turbutt, Ogston Hall, Alfreton, Derbys.—2nd Oxfordshires. Killed in action Battle of Ypres, Oct. 21, 1914.

Sapper R. C. Yole, Butterknowle, Co. Durham—Div. Engineers, R.N.D. Killed in action in Gallipoli Dec. 10, 1915.

"Dick" Yole was a very enthusiastic bee-keeper. His interest in the bees was from a scientific point of view. In fact, he was interested in all nature study. For many years he and I have taken our bees to the moors together, and he was a great help to bee-keepers in difficulties.—G. E. ROBSON.

A NOVEL WASP TRAP.

In some seasons, as in 1915, wasps are a serious menace to bees. No doubt the best remedy is to kill all queen wasps seen in the spring and autumn, and also to destroy the nests when found. It is difficult to locate all the latter, therefore there is bound to be trouble in those seasons when wasps are abundant. With his usual

A NOVEL WASP TRAP.

ingenuity the Rev. F. S. F. Jannings, F.E.S., has invented a very serviceable wasp trap which costs nothing but a little trouble. The illustration speaks for itself. A square piece of wire cloth or perforated zinc is bent so that the cone-shaped portion fits into a 1lb. honey jar, or other similar receptacle. The four corners prevent this slipping into the jar. The point of the cone is cut away so that a hole is formed. Honey, sugar and vinegar, or beer, forms the bait which attracts the wasps inside, where their doom is sealed, as the down-pointing cone prevents their escape.

SOUTH STAFFORDSHIRE AND DISTRICT BEE-KEEPERS' ASSOCIATION.

The Annual Meeting of this Association will be held at the Temperance Institute, Dudley, on Saturday, February 12th, 1916, at 4.30 p.m.

A tea will be provided at 5.30, and it is hoped many members will be present to

receive Mr. W. Herrod-Hempsall, who will give a lecture on "The Pleasures and Profits of Bee-keeping" at 7 o'clock.

The committee also invite each member to bring at least 1lb. of honey to the meeting, which will be given to the wounded soldiers in local hospitals as a present from the Association.

All interested will be welcome.

JOSEPH PRICE, *Hon. Sec.*

SIXTH ANNUAL APICULTURE SHORT COURSE IN ONTARIO.

This Short Course was held at the Ontario Agricultural College, Guelph, January 11th to 22nd, 1916.

Owing to war conditions a large attendance was not anticipated. On the opening day, however, there was an attendance of twenty-seven—later increased to thirty-five—young men and a few ladies. Practically every one of these had been previously engaged in bee-keeping. They included bee-keepers owning one hundred or more colonies, sons of successful bee-keepers, and in one case a bee-keeper's hired man. Many different parts of Ontario were represented, also Quebec and the State of Michigan. The get-together spirit was much in evidence, and the interest shown at all the lectures was very gratifying.

It was the purpose of this course to give the underlying principles of bee nature, a knowledge of which is essential to successful bee management. Fifty-nine lectures and demonstrations were given covering the different phases of bee-keeping. Typewritten copies of each lecture outline were distributed to the class, so that the main points could be followed closely and carried home for future reference. As far as possible the lectures were illustrated with stereopticon views and the actual objects under discussion. Members of the class were also given laboratory practice in hive construction, and a visit was made to the apiary of a successful bee-keeper in the neighbourhood of the college.

One important feature of the work was the display of apiarian apparatus and implements. The educational value of this was clearly demonstrated by the keen interest shown by those present.

In conducting this course, the Provincial Apiarist, Mr. Morley Pettit, was assisted by Messrs. F. W. L. Sladen, apiculturist, Central Experimental Farm, Ottawa; F. E. Millen, B.S.A., Lecturer in Apiculture and State Inspector of Apiaries for Michigan; F. W. Krouse, President of the Ontario Bee-keepers' Association; James Armstrong, Selkirk, Vice-President of the Ontario Bee-keepers' Association; also some of the apiary inspectors of Ontario. Lectures on allied subjects were given by other members of the college staff. Mr. Frank C. Pellett, State Apiarist of Iowa, paid the class a visit and lectured on bee-keeping conditions in his State.

Throughout the course there were many kind words of appreciation by members of the class, and on the last day a vote of thanks was tendered Mr. Pettit and the other instructors for the valuable information received and the systematic arrangement of the work.

It is proposed to hold a Summer School for bee-keepers at the Ontario Agricultural College some time in June when bees are active and apiary practice will be possible. Persons interested should write at once for particulars to Morley Pettit, Provincial Apiarist, Guelph, Ontario.

A DORSET YARN.

What a wealth of sunshine lately! The little bees appreciate it; they revel in the abundance of pollen on the Christmas rose, the first bloom in the new year. Even on Christmas Day these little creatures were flying from flower to flower. This crop will pay to extend if only for the bees. The white flowers are still sought after largely at Christmas and New Year, and the prices are remunerative to the grower. When established they bloom as freely as the primrose. Then the snowdrops; how early this year have they thrown up their snowy heads, how industriously have they been visited by the bees long before the flower was fully open, and after the sexual parts of the flowers were developed more and more came to sip the sweets that Nature gives so early. No wonder the snowdrops seed so liberally and extend as they do where once they get a footing. The most beautiful that I have ever seen are at Dean's Court, Wimborne, the beautiful home of Sir John Hanham. Everywhere are snowdrops, close to the roots of gigantic trees on whose tip-top branches the rooks make their nests, on banks and borders, the lawns are covered with them even close to the river's edge. What a paying crop this must be to those who have a sheltered valley and they grow as abundantly as they do here. I was in Covent Garden the

second week in January and saw them sold at 4d. for twenty flowers. From these delightful grounds they cannot be bought, but are given away by Lady Hanham in large quantities. The thoughtful man can see every flower must seed liberally. The seeds drop on the soil and soon make flowering bulbs, yet how few are the varieties; no wealth of crosses, as have some bulbous plants, each new bulb develops the same as its parent and the same size, a true instance of the old statement now so often heard, "What's good enough for our fathers is good enough for me."

J. J. KETTLE.

[In a note enclosed with the above yarn Mr. Kettle says, "The War Office notifies me that one of my soldier sons was killed in action in Mesopotamia—the first of my three to go under. He was only 23. His last letter home read, 'Pray for me, pray for the regiment.' His regiment—the 2nd Dorsets—has suffered great losses."

We are sure all our readers who have enjoyed Mr. Kettle's delightful "Yarns" will join with us in sympathy with him, and all others who have lost those near and dear to them.—EDS.]

"ISLE OF WIGHT" DISEASE AND IMMUNE BEES.

The extra burdens imposed on all of us by the circumstances of these evil times have forced bees into the background except where they are a prime interest, and perhaps it is not to be wondered at that the correspondents of the JOURNAL have lately been mostly those who complain of misfortune.

One cannot help feeling surprised, however, to notice that after all that has been written about the "Isle of Wight" disease, there are so many going over the old ground—as though we had not advanced one step in the past five or six years.

So many appear to fall into a state of hopelessness when the disease attacks their apiaries and complain again about the impossibility of doing anything.

I come into touch with heaps of cases, and most rarely do I find any attempt made to deal with the disease in a thorough manner. The disease breaks out. The first thought is to destroy the stock. Second thoughts indicate the desirability of getting advice. By the time it arrives the bees have made some recovery, owing to improved weather conditions perhaps, and then things are allowed to go. This is what happens in the spring nine times out of ten, and by the time the symptoms reappear late in the autumn the day of grace is passed and everything goes down.

I have never wavered from my belief that salvation lies in immune bees, and I have proved over and over again that removing the stores in the spring and again in the autumn keeps the disease under control.

Our good friend D. M. M. loudly asserted a year or two back that there were no immune bees. What does he think of this?

On April 14th I procured a stock, placed it in a diseased hive, gave it diseased combs, and fed it with diseased honey. It flourished exceedingly, and gave a good surplus. In May I purchased a local swarm, gave it fresh foundation and a clean hive. It stored honey well, and went into winter quarters with full combs. In September I hived a driven lot on nice clean combs, with the exception of one, which was partly filled with contaminated stores.

Both this and the swarm died out from the disease during the winter. The other stock robbed most of their stores, but came out strong in the spring. During the season I increased it to seven, and took a fair amount of surplus. On May 1 found a swarm from a certain hollow tree in the neighbourhood. This was hived on partly filled combs from the immune stock. It gave a fair surplus, and went into winter quarters strong. To-day it is extinct, while the inhabitants of the other seven had made considerable raids on its stores before I thought it as well to remove them myself.

Now if this is not immunity I would like to know what is. I am, at any rate, confident enough to work these seven stocks for increase for all they are worth in the coming season, and if there are no more immune bees about, perhaps if I hang on a little I may be able to command something in the way of fancy prices for them. Who will start the bidding?—HERBERT MACE.

RANDOM JOTTINGS.

By Charles H. Heap, Reading.

It is evident that Mr. Carter, of Baldon, Oxford, whose letter appeared in the BEE JOURNAL for Dec. 2nd, 1915, has, like most beginners, had his fancy tickled by the bright colour of Italians, or perhaps he desires to have "something foreign," and so differ from his neighbours. However, the story he tells of the supposed superiority of Italians over native bees where "Isle of Wight" disease has appeared is unconvincing, and is evidently based on a lack of knowledge and careful and prolonged observation. Moreover,

Mr. Carter has failed to take some important factors into consideration, and sooner or later he will discover, as Longfellow says, 'that "things are not always what they seem." In recent years I have inspected thousands of stocks in different parts of the country, and can say that no matter of what variety a stock may be, I have never known, or even heard, of one having recovered from the disease.

No Value in Colour.—As Mr. Carter has so much faith in colour as a factor in warding off disease, I may relate a little story which will interest him and others who seem to have such a poor opinion of British bees, which, by the way, have again and again shown their ability to secure great quantities of honey and to hold out as long as any other variety against "Isle of Wight" disease. In the spring of 1914 a bee-keeper, who was expecting my visit, met me at his garden gate with the cheery remark, "Mine are all right; they are So-and-So's goldens." I smiled in response to the greeting, and knowing that everybody's bees in the neighbourhood were dead or doomed to death, I suggested an immediate visit to the apiary. The cheeriness vanished as I regretfully pointed to "goldens" crawling all over the garden

Penny Wise, Pound Foolish.—Mr. Bigg-Wither wants to know whether five minutes' immersion in a 40 per cent. solution of formaldehyde will destroy the spores of *Nosema apis*. I do not suppose that an experiment of this kind—which would be troublesome and a trifle costly—has been made, but it is quite possible that the spores would survive the treatment. If Mr. Bigg-Wither is thinking of saving combs in this way I would commend to him *Punch's* famous advice to those about to marry, because I feel sure the process would not be a success. The safest course for Mr. Bigg-Wither to adopt is to melt up the combs and have the wax made into foundation. The cost per colony will only amount to about a shilling. Is it really worth risking a colony for the sake of so small a sum?

Can Foundation really spread Disease?—Mr. Pearman's letters on foundation, "Isle of Wight" infection, and the practices of experts deserve attention. I think no one need trouble about disease being spread by foundation unless it has been in contact with infected honey or combs, even if the wax came from hives in which the bees died from "Isle of Wight" disease or foul brood. Supposing unsterilized spores were incorporated with the wax, the chances of their germinating are very remote, on account of the wax in which they are embedded and with which they are more or less coated. This, of course, renders them impervious to moisture, but should a little suitable moisture reach a spore, it is possible that it would be so "cribbed, cabined, and confined" that its transition into the vegetative stage would be rendered impossible.

Experts as Carriers of Disease.—I agree with Mr. Pearman that the carbolic cloth is a dangerous thing for an expert to use if it is his own, when visiting a series of apiaries. An expert who uses a carbolic cloth in this way shows that he does not understand his work. But is the carbolic cloth the only dangerous thing some experts use? During the first tour of inspection I made I was astonished at the amount of disease I found, and, perceiving the danger of using my own tools, I ceased to use them. I have carried a small smoker and a small screwdriver, but have never used them except in case of emergency, which has rarely been more than once a week. The bacilli and spores of foul brood may be as easily carried by the smoker from one apiary to another as by the carbolic cloth. My practice on visiting an apiary has been, first of all, to ask for a smoker, screwdriver or chisel, and a pint of water in a basin. The water is used for diluting an antiseptic in which I wash my hands before commencing operations, after the manipulation of each hive, and, finally, the smoker and tools, if I have discovered disease. Before departing I wash my hands with plenty of soap and water, and then, as I always take care to keep frames, combs, and quilts off my clothing, I feel, if I have been dealing with diseased stocks, that I have left disease behind me.

It is nice to use a smoker upon which one can rely, but it is not fair to the owners of the apiaries visited to use it indiscriminately in manipulating diseased and healthy stocks. I eschew the fragrant weed, and, in carrying out my work on the principles I have laid down for myself, I have used a wonderful variety of "wind instruments." When looking at stocks which I have known from past experience to be suffering from foul brood, or I could see were attacked with "Isle of Wight" disease, and I have been unable to secure any smoker except that in my bag, I have used a rag torch and blown the smoke among the bees with my breath. Every bee-keeper who receives visits from an expert should provide the tools the expert will require, and see that he uses them. He should also give the expert no excuse for not sterilizing his hands before, during, and after manipulations. At the same time if the owner of the bees lends a helping hand,

the expert should do his best to get him to comply with the rules.

Testing Mr. Herrod-Hempsall's New Book.—I have had the pleasure of reading Mr. W. Herrod-Hempsall's new book, "Bee-keeping Simplified," and upon it I wish to offer one adverse criticism. In the chapter on Diseases, which might advantageously have been extended a little, the author says that when "Isle of Wight" disease attacks a colony it quickly dies. In my opinion the opposite is the case. To me the general instructions given in the book are as clear as noonday; but then to me the subject is familiar. I therefore decided to put the book to a severe test. I accordingly placed it in the hands of a Londoner by birth, who takes a general, though not scientific, interest in natural history, but who had never noticed a piece of honeycomb. After reading the book he told me he understood everything perfectly except some references to the combs; and that the little work had so aroused his enthusiasm that, "Isle of Wight" disease or not, he intended to start in bee-keeping when he leaves the army after the war. What better testimony could such a book have than that?

CORRESPONDENCE.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

COMB FOUNDATION AND BEE DISEASES.

[9234] I would like to say a word in regard to letters from Mr. J. Pearman in the BRITISH BEE JOURNAL of Nov. 25th last year, and Messrs. Steele and Brodie of Jan. 13th, 1916, and again from Mr. Pearman Feb. 3rd, 1916. This is a discussion I am interested in, having taken your valuable journal for about thirty years. Mr. J. Pearman seems to accuse brood foundation of introducing and spreading foul brood, but says he is not sure about it, while Messrs. Steele and Brodie seem quite sure it is a thing almost impossible. Of course, basing this opinion on the report of the United States expert, I will try to show both parties proof of their statements. Some time ago I bought a lot of foundation. I always buy the best, and when I introduced this particular foundation I was surprised to find foul brood in every hive; before having this foundation they were clear. I did not know what it was to have disease. Now this is the point I want to lay before both correspondents. A particular friend of mine, living some three miles away, had a swarm come out unexpectedly. Having no foundation he cycled to my place for a pound, which I let him have. He had a new hive, frames and all, put his swarm on this foundation in the new hive, and the first batch of brood to hatch was affected with foul brood. Now, Messrs. Pearman, Steele and Brodie, where did this disease come from, as he had none before? He fetched me to look at it, and I sent the lot of my foundation back and got some more in its place. I have used every means since, both in destroying stocks, starving and burning, and every remedy advertised except Izal, and *it* is the next. I have spent pounds trying to get rid of it, but have failed to get clear, and until we can get foundation that is free we shall never get rid of the pest. I often feel I should like to send you a line on different points, but never plucked up till now. This is my first attempt.—C. CLARKE, The Laurels, Loscoe, Derbyshire.

[We are always pleased to hear from our readers, and hope they will not hesitate to write, especially if they can give practical experiences.—EDS.]

ECHOES FROM THE HIVES.

Last year I had eight stocks, from which I had four swarms and about 300 lb. of honey; altogether I had about £8 10s. clear profit. I have twelve stocks at present, all healthy and strong. At the beginning of January several of them were carrying in pollen in full loads from the Laurestinus, as we have a large bush in the garden.

There are not many bees left round here now, as the wasps and disease have finished them off.

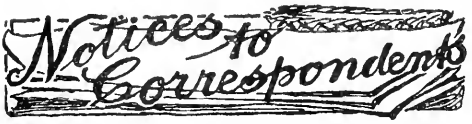
I hope you have not forgotten your "Helpful Hints to Novices"; they are such a help to one. I find them so myself, and shall be glad to see "Queen Rearing and Introduction" start again, as I am thinking of rearing some queens myself next season. Wishing you and all readers of BRITISH BEE JOURNAL a prosperous year.—T. O. DOWNS, Hardwick Lodge, near Wellingborough.

WEATHER REPORT.

WESTBOURNE, SUSSEX.
JANUARY, 1916.

Rainfall, 1.46in.
Below aver., 1.16in.
Heaviest fall, .26, on 2nd.
Rain fell on 20 days.
Sunshine, 33.1 hrs.
Below aver., 30.2 hrs.
Brightest day, 24th, 5.1 hrs.
Sunless days, 14.
Maximum temperature 55, on 1st.
Minimum temperature, 30, on 23rd and 25th.
Minimum on grass, 23, on 14th and 23rd.
Frosty nights, 2.
Mean maximum, 49.8.
Mean minimum, 40.9.
Mean temperature, 45.3.
Above aver., 7.4.
Maximum barometer, 30.538, on 31st.
Minimum barometer, 29.625, on 1st.

L. B. BIRKETT.



Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. All questions must be accompanied by the sender's name and address, not necessarily for publication, but as a guarantee of good faith. There is no fee for answering questions.

B. D. (Bucks.).—*Utilising spare autumn syrup and soft candy.*—You may make them into syrup for spring feeding by adding about ¼ pint of water to each pint of autumn syrup and ¾ pint of water to each pound of candy and just bringing to boiling point.

Suspected Disease.

SPERO (Lowestoft), "M." (Enfield).—It is "Isle of Wight" disease.

E. HERD (Egham).—Both lots were too dry for diagnosis, but there were symptoms of "Isle of Wight" disease.

G. P. D. (Cornwall).—It is "Isle of Wight" disease. The best plan is to destroy them.

NOVO (Kent).—"Isle of Wight" disease. You did not prepay sufficient postage on the box.

AMATEUR (Linlithgow).—(1) It is "Isle of Wight" disease. (2) Scorch the inside of brood-box and the floor-board with a painter's lamp, or apply thoroughly with a brush a solution of Izal or Calvert's No. 5 Carbolic Acid 1 part to 2 parts of water. Wash all other parts with 1 oz of one of the above disinfectants to 2 quarts of water. Expose to the air until the smell disappears. When thoroughly dry give the outsides of hives one or two coats of good oil paint. (3) There is nothing wrong with the honey. Different samples vary greatly in the time they take to granulate.

Special Prepaid Advertisements

Two Words One Penny, minimum Sixpence.
Will advertisers please read these Rules carefully in order to save trouble, as they will in future be strictly adhered to.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not permissible at above rate, but will be inserted at 1d. per word as* **"Business"** *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of 5s. per ¼in., or 5s. per inch.*

PRIVATE ADVERTISEMENTS are only intended for readers having **Surplus Stock to** *dispose of.* **Driven bees, Nuclei,** *and* **Queens that are reared or imported for sale,** *are Trade Advertisements, and can only be accepted under trade terms.*

Advertisements must reach us NOT LATER than FIRST POST on TUESDAY MORNING for insertion in the "Journal" the same week.

Orders for three or more consecutive insertions in "The Bee Journal" entitle advertisers to one insertion in "The Bee-Keepers' Record" free of charge.

PRIVATE ADVERTISEMENTS.

FOR SALE, six good hives, 6s.; four larger, 8s. each all painted; in good condition.—ENOCH DAVIS, Llandudno. v 22

THREE stocks bees, in bar frame hives, 30s. each; carriage paid.—MOORE, Kirby, Misperton, Pickering. v 23

HOT-AIR incubators, for quick sale, at bargain price; 60-egg capacity.—SEADON, Stanley-road, Bromley, Kent.

PLANT NOW.—Willow herbs, 9 roots, 6d.; Limnanthes, 50 roots, 6d.; Ohio Sweet Clover seed, packets, 3d.—BOWEN, apiarist, Cheltenham. v 25

WANTED, 1 cwt. of light or medium English honey.—W. FAY, Wade, Havant. v 24

SEVERAL good hives with lifts, 7s. 6d. each; shallow frames and section racks, 1s. 3d. each; feeding bottles, 1s. each; excluder zincs, 9d., a few of each to clear.—H. T., "BEE JOURNAL" Office, 23, Bedford-street, W.C.

WANTED, cloth-bound copy "Bee-Keepers' Record." Vol. 7, year 1909.—HERROD-HEMPSALL, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

SOFT Bee Candy, medicated or plain, 1lb. glass top boxes, 7d., postage 5d.; 2lb., 1s. 2d., postage, 6d.; reduction for 7lb. and over.—Box 999, "B.B.J." Office, 23, Bedford-street, W.C.

BRITISH BEE-KEEPERS' ASSOCIATION.

The Council of the British Bee-Keepers' Association are anxious to obtain gifts of honey for the wounded soldiers in the London Hospital, where it is urgently needed both for food and medicinal purposes. They will, therefore, be grateful for gifts of same, no matter how small, from bee-keepers throughout the British Islands. It is unnecessary to explain our obligations to these brave fellows, who have sacrificed health and limbs for the sake of our country. Gifts should be sent addressed to the Secretary, B.B.K.A., 23, Bedford Street, Strand. The donors' names will be published in the "B.B.J."

W. HERROD-HEMPSALL,
Secretary.

HONEY FOR LONDON HOSPITAL.

Amount received	221½ lbs.
Mr. W. Calvert	6 sections
Total	227½ lbs.

A ROLL OF HONOUR.

Although bee-keeping is considered a minor pursuit, we venture to say that it has provided more fighting men than the usual average of any industry. To place on record the part the members of our craft have played in the present war we propose to make a "Roll of Honour," and shall be pleased if our readers will forward us the **Names** and **Addresses**, together with the **Regiment** and **Rank**, of any bee-keeper serving his King and Country at home or abroad; also if killed or wounded.

We print a further list of names to those sent in, and shall be pleased to have other names as soon as possible.

Lieut. G. M. Gordon, Stranraer, Wigtown.—R.N.V.R. Lieut. Gordon has also served five months at the Front as Lieut. M.T. Lahore Div., and was invalided out, obtaining a commission in the senior service after nine months' convalescence.

Major Harris.—5th Welsh Division.

Staff-Sergt. A. V. Campbell, The Croft, Harpenden.—A.S.C.

Sergt. J. Lomon, 6, Park Village East, Gloucester Gate, Regent's Park.—A.S.C.

Cpl. William Henry Lee, Oriel Cottage, Farnborough, Hants. 1st Hampshires. Killed in action.

Pte. V. Price, Haden Hill, Old Hill, Staffs. R.A.M.C. A son of Mr. J. Price, Secretary of the South Staffs. B.K.A.

Pte. Edward Lee, Wormit, Fife.—2/5 Black Watch.

George Lee, R.N., Oriel Cottage, Farnborough, Hants. H.M.S. *St. Vincent.*

WITH THE BEES AT THE FRONT.

By Sergt. A. G. Atwell.

(*Continued from page* 20.)

We stayed at the Convent of St. Barbara for about eight days, during which time the beautiful village church and most of the houses were destroyed by shell fire. Although the convent was very much exposed, the Germans, for some reason, did not shell it until the night we left. That awful night I shall never forget. The regiment were being relieved by the French, and by seven o'clock were well on their way back, together with the majority of our stretcher-bearers. The doctor, myself, and two or three men remained behind to look after some wounded for whom we were expecting an ambulance. However, this never reached us, for about nine o'clock the Germans started an attack on the positions taken over by the French. During this attack they seemed to remember the convent, for they rained shell after shell upon us. These were shells of the heavy type, and any direct hit would have blown up the convent and set it on fire. We simply sat there with the wounded, expecting every moment to be the last. It was an awful experience; these huge shells, which were being rained on us at the rate of two every minute, could be heard, and I might even say felt, coming from a great distance away, and it was not until after the terrific explosion (which shattered all the windows and shook the convent like a boat) that we knew that another had missed its mark. The suspense eventually became so great that we decided that we must get away somehow, and a shell crashing through a part of the roof hastened this decision. We carried the wounded from the convent, down an open fire-swept piece of road, and through the still burning houses of the village. We eventually reached safety, where we handed our wounded over to the ambulance, but it was well after daybreak before we reached our regiment. This experience so affected

the doctor that the following day he had to be sent away to the base, and, as far as I am aware, has never been in a fit condition to return to the front. After two days' rest we marched to Ypres, where we took part in the desperate fighting which took place towards the latter part of the year. I had the pleasure of seeing this beautiful old town with its famous Cathedral and Cloth Hall before it was much damaged by the Germans, and I also had a splendid view of the famous Cathedral of Rheims when passing through that place earlier in the war, a fact which I forgot to mention before. During the time we were at Ypres I had a very narrow escape. I was struck by a bullet in the back of the head, which then splashed against a wall near by and was picked up at the time and given me by a friend who was walking just behind. Although I carried a souvenir as big as an egg on my head for several days, the swelling eventually went away all right, and I am now none the worse, except for a little scar which will always remain with me and remind me of that lucky escape.

(To be continued.)

[Sergt. Atwell, who has lost the whole of his bees while at the Front, wishes to restart on his return to civil life next month. Would anyone who has two healthy stocks to dispose of kindly send price and particulars to him at the following address?—Headquarters, 1st Infantry Brigade, B.E.F., France.—EDS.]

SERGT. A. G. ATWELL.

A DORSET YARN.

How delightful is rural England now! Flowers in every hedgerow and coppice. The plums are showing their small, round white buds, jargonelle pears ready to burst open; a wonderful early season truly. I would like to yarn of the hazel-nut this week, for just now the crimson stigmas of the female flowers are showing on every branch. The *Avellana* (name given to the nut family) belong to that class that have two kinds of flower on one tree or plant; it is most plainly seen in the cucumber and

marrow family; one flower has pollen only (the male flower), the other has the stigma and seed-bearing organs (the female flower); but in the hazel family the male or pollen flowers hang in long racemes, called catkins; these are out sometimes in October, and will hang open all through December and January. The crimson stigmas of the female flower only come the first week in February. How different to the pollen flowers are they—just a small plume of crimson showing out of the green calyx! Yet the pollen from the male flowers is carried to the female flowers largely through the agency of the wind, and by our little friends the bees. The hazel coppice now is very pretty with the thousands of yellow catkins hanging down like long caterpillars, and as the wind sets them all in motion the whole coppice seems to be alive.

This year there are more than ever of them, owing to the shortness of labour. Many coppices that would have been cut and made into hurdles for penning sheep are left till other years when labour is more plentiful.

The hazel rod has long been known to have mystic properties, from the time of the patriarch Jacob down to modern times. As a water diviner, with some men it certainly has a magic charm. I remember two years since, as one of a parish council of nine, only one of them when holding the hazel rod firmly in each hand felt the magical thrill when passing over water, and when the soil of the grass field was taken off an old well was found which had been covered down many, many years, but only one of the nine felt the peculiar electric thrill of the muscles of the arm. A mile from here, on a high hill, a gentleman built a large mansion; he paid a water diviner to come and test for water. He took the forked hazel rod from the growing trees by, and walked round the estate to find the likeliest place near the mansion for water; he stopped at one place, and said, "Here is water at 50 feet." When the well was dug they went 55 feet. This I know happened; the rods had no effect on me (perhaps I had not faith enough).

At any rate, these are useful fruits to grow. They are rich and nutritious, and the fruit keeps a long time. The trees are always interesting, and are never quite bare, for when the leaves are all off them there are the long catkins of the male flowers waiting for the female flowers to open in February, and after that the catkins hang until the leaves and growth extend.—J. J. KETTLE.

SERGT. ATWELL'S APIARY.

HEREFORDSHIRE BEE-KEEPERS' ASSOCIATION.

ANNUAL MEETING.

The annual meeting of the Herefordshire Bee-keepers' Association was held at the Shirehall, Hereford, on Wednesday afternoon, Jan. 26th, Mr. J. Corner being

in the chair. Others present included the Rev. K. O'Neill, the Rev. H. E. Knight, the Hon. Mrs. Wilmot, Mrs. E. G. Bradstock, Mr. G. Cookes, Capt. Paterson, Miss G. Riley, Mr. J. Armfield, Mr. J. F. Millers, Mrs. and Miss Jones (Hoarwithy), Mrs. M. Baynes, Mr. G. H. Holder, Mr. J. Harris, Mr. J. W. Stephens, the Rev. H. W. B. Mynors (hon. treasurer), and Mrs. Mynors (hon. secretary).

THE LATE PRESIDENT.

The Chairman said he occupied the chair that day on the invitation of Mrs. Mynors, and he was sure that to all those present it was a matter of regret that Sir James Rankin had passed away and was no longer the president of the Association. Sir James had been always ready to do anything he could for any good object in the county, and his death was not only a loss to that Association, but it was also a loss to the whole county.

Rev. K. O'Neill, who submitted the name of Sir Joseph Verdin as President, also paid a warm tribute to the work done in the county by the late Sir James Rankin. They were fortunate in having Sir Joseph Verdin to take on the work which Sir James Rankin had done so well.

Sir Joseph Verdin was unanimously elected President, the motion being seconded by the Rev. H. E. Knight.

Mr. H. Bailey, Mr. FitzHerbert Wright, M.P., Dr. Readman, and Mrs. Webb resigned their positions as vice-presidents, and Mrs. Partridge (Bacton), Miss M. Coates, and the Rev. K. O'Neill were elected to take their places. The other vice-presidents were re-elected.

The local hon. secretaries who were willing to continue in office were re-elected, and arrangements were made to fill the places of those who resigned.

Mr. J. Wootton and Mr. G. Watts resigned from the committee, and the Rev. E. Lloyd (Old Radnor) was elected to a seat, the other members being re-elected.

The Hon. Mrs. Wilmot and the hon. secretary were appointed delegates to the British Bee-keepers' Association.

The Rev. H. W. B. Mynors and Mrs. Mynors were re-elected hon. treasurer and hon. secretary respectively. The Chairman and the Rev. K. O'Neill paid a warm tribute to the excellent way in which both these officials had done their work, and a special vote of thanks was accorded to Mrs. Mynors for her untiring efforts on behalf of the Association.

With regard to the finances of the Association, the Treasurer reported that they began the year with a balance in hand of £5 9s. 2d., and ended with a deficiency of £8 1s. 8d. That was due to the expense of experts in regard to the outbreak of disease in the county.

A hearty vote of thanks was accorded to the Chairman, and a draw was then made for a hive, the winner being Mrs. Price, The Twinings, Putley.

(*Continued from page* 38.)

For preference a hive holding fourteen frames should be used, although a twelve-frame one will do. The frames hang parallel with the entrance, so that any number of combs may be shut off. It will be necessary to have some wooden shells for the accommodation of the artificial cells, as seen No. 1, Fig. 37; the dotted line shows the cavity which is filled with wax, and while this is warm the cell base is made in it by means of a forming stick. It is also advisable to have some flanged holders into which the shells will slide lightly, No. 2 of the same illustration, the dotted lines showing the situation of the hole, while in No. 3 it is seen in longitudinal section. In No. 4 the holder, with shell in situation, is shown in longitudinal section, while No. 5 gives the whole thing complete. Next cut a division board in half, then take a strip of wood 14½in. long and ¾in. thick and drive some fine ½in. sprigs through it right down the centre about 1¼in. apart. This is nailed on to the bottom of the cut division board, so that the heads of the sprigs are up against solid wood, which prevents them penetrating right into the division board when the shell is pushed

on, which they would do if a headless sprig were driven in. When the shells are forced on to them they will easily penetrate as they go in parallel with the grain. The details are shown clearly at Fig 38. A queen excluder division board is then made by constructing a strong frame of wood that will fit tight in the hive at the ends, and go right down on to the bottom board. It should be of wood strengthened, to prevent buckling, by nailing across it a couple of slats at equal distances from each end, as seen in Fig. 30.

The hive is now arranged as Fig. 30. A comb containing honey and pollen is placed at the back of the hive, then one containing very young brood, next the

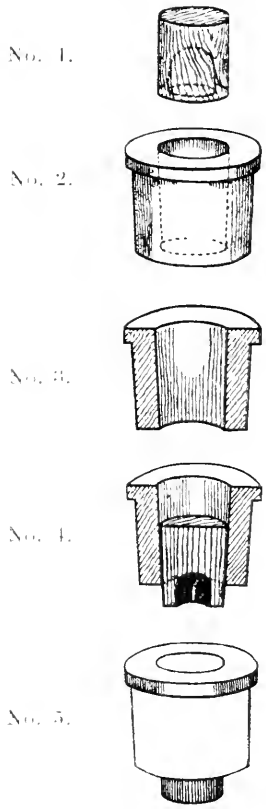


Fig. 37.

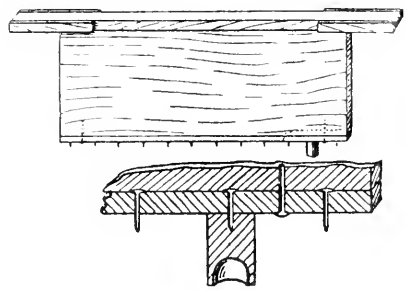


Fig. 38.

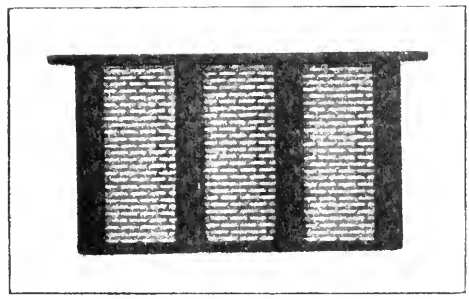


Fig. 39.

halved division board, having the shells prepared with cell bases, as described, in position, then a comb containing only sealed brood. The queen excluding division board is now put in, and all the brood at the front brought up to it, while the combs containing honey only go next to the entrance. Care must be taken to find the queen and place her in the front portion of the hive. In from one to two days the bees will accept the artificial queen cells, which is indicated by their working upon them, Fig. 41. Larvæ from the desired stock can then be placed in position at the base of each cell; the bees will then complete the work, Fig. 42. When sealed over, the cells can be removed, Fig. 43, to nuclei for hatching, and a fresh batch started. Or if each cell is caged the queens may be allowed to hatch out where they are. If removed to place in other hives the shell should be slipped into the flanged holder, as illustrated at Fig. 37; there is then less fear of damaging the cell, and it can also be slipped into a hole in a baby nuclei as explained later. If successive batches of cells are desired the arrangement of brood as shown

in Fig. 40 must be carried out every eight to ten days. This is easily done by putting the comb marked A, which contained the youngest brood, that will

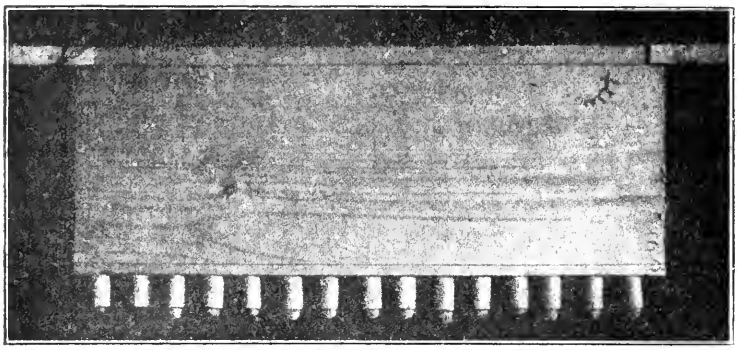


Fig. 41.

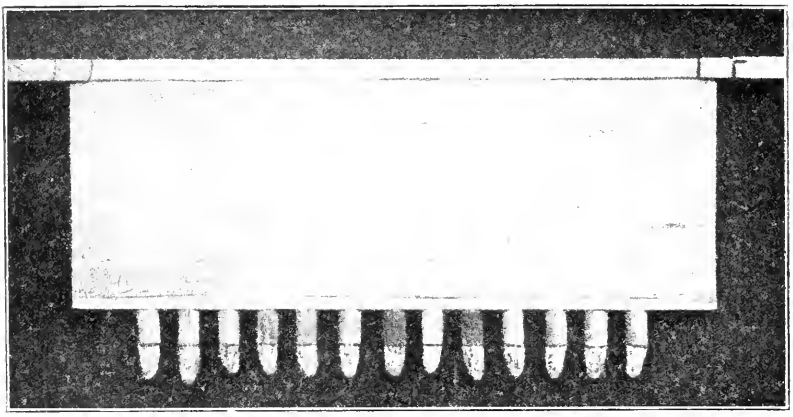


Fig. 42.

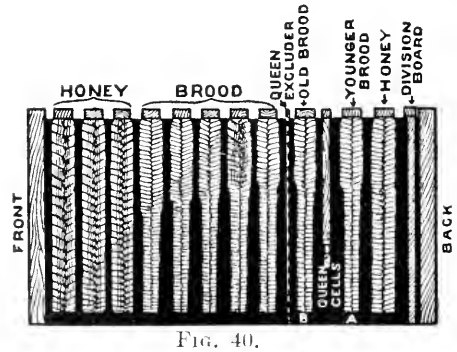


Fig. 40.

Fig. 43.

now all be sealed over, in the place of the one marked B, the latter is removed and put in the front portion of the hive in the place of a comb containing young brood, which is removed and put in place of A.

(*To be continued.*)

DERBYSHIRE BEE-KEEPERS' ASSOCIATION.

At the annual meeting of this Association the Hon. Secretary's Report showed that during the past year 31 new members had been enrolled, while 190 members had subscribed. The financial position had considerably improved. After paying all liabilities there was a credit balance of £18 4s. 1d. to carry forward. His Grace the Duke of Devonshire was re-elected President, and to whom was accorded a hearty vote of thanks.

THE BEES TO THE RESCUE.

I do not think we can discuss too much the disease variously known as *Nosema Apis*, *Microsporidiosis* and "Isle of Wight." Still, by the way, it is a little pathetic to find Mr. J. Price taking consolation from the fact that since the advent of "Isle of Wight" disease, "foul brood has been eclipsed." It is not as though "Isle of Wight" disease had wiped foul brood out, for most people tell me that the former has lent the latter a very helping hand.

Man has had ten years to deal with the disease and has done nothing. May it not be that in that time the bees themselves have awakened to their evil plight and are beginning to take the matter successfully in hand? It has been noted in these columns that stricken bees are taking to much swarming, and that when they have any spirit in them they try to wear the enemy down by early and much breeding. I think, from what I have seen, that when they swarm they are more inclined than before to go long distances, thereby dropping many carriers, and perhaps coming to a place where the hostile germs are rare. I have also noticed that they are more fastidious about the hives they go into, and do not like ready-made combs, of which, alas, there are too many about of very doubtful antecedents.

I noticed, too, long ago that the bees recognise carriers of the disease as soon as we do, and that where they are not too many the police will fetch them out and forbid them the hive. If the evil has grown up quietly among them familiarity may blind them to it, as it does with us. When we unite a bad stock with a fresher one we see a great deal of "chucking-out," and if we make two equally bad stocks exchange stands we see the fliers of each dealing far more faithfully with the strange sick than they used to do with their own sick. Gradually, I think, a more vigilant Committee of Public Safety is arising in each hive, and if we can give it a little encouragement (out of our superior wisdom) perhaps it can win the day.

This theory rests on the somewhat heretical doctrine that a stock afflicted by "Isle of Wight" disease does not always die. I think there must be some that have not done so, and among hundreds of stray swarms whose history is not known will be some that show no sign of the disease, though they issued from diseased stocks. The disease has been active with us so long that nearly every strain in the country must have known it, and a statistician knowing how many have died and how many still survive would come to the conclusion that a good number of the latter must have gone through it.

As for the help that we can give to the bees in this endeavour to get the epidemic under, who can say what it is? Fresh air, drugs, antiseptics, and perhaps others, have been tried. I have a theory, not precisely belonging to either category, which, if the Editors will give me space, I will propound on another occasion.—G. G. DESMOND, Sheepscombe, Glos.

CORRESPONDENCE.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

"ISLE OF WIGHT" DISEASE AND IMMUNE BEES.

[9235] I wish to ask Mr. H. Mace, who writes in your JOURNAL, February 10th issue, the letter "'Isle of Wight' Disease and Immune Bees," a few questions about which he leaves us in the dark: (1) What sort of bees are they? (2) In what sort of hives are they? (3) Does he use whole sheets of foundation, or old combs? I shall be glad to start the bidding as he asks at the foot of his letter, and will place the swarm surrounded by good (best) *spring and autumn heather feed two miles from any other bees.*

Having kept bees, and as many as fifty-five hives at one time, I know a little, and quite agree with him that some bees are *immune*, like human beings, but I cannot say why. Of one thing I am nearly sure, that we are *depriving* the bees of performing their natural function in a wild state

by giving them *full sheets of foundation*. Mr. Herbert Mace certainly gives his bees some wax making if he removes the stores in both spring and autumn, and thereby "keeps *the* disease under control."

Bees to pay must have:—

1. Sound hives.
2. Sound bees and queen.
3. Sound *cane* sugar, and given plenty of it if we rob their stores.
4. Feed swarms for a week at least.
5. Big brood nests.

Bees in a church roof do not often die off.—R. W. H.

BEES ON WEST COAST OF AFRICA.

[9236] I have before me your beloved paper of the 26th August last, and it is as usual a treat to me to read it at the present time if anything more than at others, because "L'Apiculteur" only comes now and then, and German bee papers not at all.

But I must ask your forgiveness to comment on your reply to Query No. 9027 on page 310 (Vol. 43).

My letters that had the honour to be published in your issues from October 31st, 1912, to January 14th, 1915, about the Nyasa bee all refer to *Apis Adansonii*, and you will pardon me for defending her against the accusation of producing "wax of a dark brown colour with an unpleasant flavour."

Colour is anything from the darkest brown to as clear a white as this paper, according as to whether the comb has been bred in many times, or is newly made, just as with any European bees.

Odour is just as aromatic as that of European wax from European bees, there being the same difference between old and new comb.

A dark brown wax with unpleasant flavour, and in every way worth about one-third of real beeswax, is produced in Africa by small insects totally different from bees, looking more like winged ants, presumably related to the Trigones and Melipones of Northern South America (Brazil, etc.), which are stingless, but do not lend themselves to scientific cultivation like bees, because their structures are in the horizontal and very small; also their honey is so bad as to be eaten only by natives.

Probably your informant has mistaken the product of these for that of *Apis Adansonii*.

As to the quality and value of my wax I beg to refer you to Messrs. John Haddon & Co., of Salisbury Square, London, who have handled many tons of it. Their latest sale account received is dated 12th July last, and gives the price of £7 per cwt.; practically the same as the wholesale price of English wax, unbleached, at the present time. Mine was not bleached.

From my previous letters above referred to you will see that *A. Adansonii* is satisfactory in every way if the conditions are anything like good. Moreover, they are acclimatised, and the most important, free from any known disease.

South Africa has strictly forbidden the importation of any bees, which in view of the "Isle of Wight" disease is an absolute necessity with bees from England. I think I ought to write this lest querist No. 9027 be encouraged to take advantage of possible absence of similar legislation in his parts and introduce there English bees, with considerable expense and risk of failure, besides the danger of introducing disease, when he can get *A. Adansonii* without any of these risks and practically without expense locally.

If the querist will try the *A. Adansonii* and use his European experience he will no doubt find her as good as any as soon as he will have learned to allow for the different climatic conditions. For instance, text-books tell you to manipulate bees about noon. Never do that in tropical Africa, or you will find them fiends. According to the temperature and weather do it just after sunrise or just before sunset. Only yesterday afternoon I drove a wild colony out of the earth, where they had built in the dwelling of a field mouse. I let the native who was with me use my veil, and worked unprotected myself. In manipulating frames avoid standing in the sun, preferably by having the hives in good shade, which is better for the bees as well. I will not bore you by lecturing, for which I am not qualified, but I can assure your querist that he need not fear evil-smelling wax from *A. Adansonii*, and once he gets to know them will like them as much as I do.

About three months ago, during the cold weather, when there is no nectar, I had a curious experience. The fence near the bees was blown over, and they resented it and started chasing the fowls, the European fowls being rather tame, I managed to catch them, but the native fowls and many young chickens were too quick for me and had to be left to their fate, with the result that all I could not catch (about 30) were killed, with the exception of some six-day-old chickens, which after the slaughter I found huddled together within six yards from the bees, showing off with their cream fluff against the dark earth. Tell me, dear Editors, why did the bees spare them and no

others? L. W. J. Deuss, Fort Johnson, Nyasaland.

[We are pleased to have the above remarks from our esteemed correspondent, as it gives us the opportunity of entering more fully into the question raised. Our reply on page 310 referred to the West Coast of Africa, to which our Irish correspondent alluded without specifying any particular country. We had in view that part of the west coast from Senegal to Nigeria, from which large quantities of beeswax are imported into this country. From samples in our possession the worst wax is from Gambia, which is dark brown. That from Senegal comes next, is very dark and has an unpleasant odour, whilst wax from the Niger is grey, or yellow to dark brown. Our correspondent will note that we did not accuse *Apis Adansonii* of producing "wax of a dark brown colour," but all these waxes are derived from these bees. The dark colour is due to the manner in which the wax is obtained by the natives, who, after pulling up the nest, crush the contents, brood, pollen, propolis, and any rubbish it may contain being mixed with the wax. The contamination is the handiwork of man, not the bees. Although the natives make some attempt to separate the impurities from the wax, they do not succeed in doing it effectually, and the wax has to undergo further purification in this country before it is fit for use. It is imported in blocks or cylindrical masses of about 50lb. weight.

On the other hand, the wax coming from the East Coast and Central Africa is quite a different quality. We have our correspondent's testimony as to the quality of his wax produced in British Central Africa, and we have in commerce excellent wax from Mombassa and Zanzibar, which is of a light yellow to dark orange colour, while that from Madagascar, produced by *Apis unicolor*, is light brown and of an aromatic odour. No doubt with improved methods of management which could be made to supersede the present crude native methods, equally good wax could be obtained on the West Coast of Africa. The only explanation we can suggest to the enquiry why the six-day-old chickens were spared is that possibly they huddled together and remained quiet, while the others ran about and irritated the bees. —Eds.]

ECHOES FROM THE HIVES.

Last winter I lost two stocks out of four with "Isle of Wight" disease. I started spring 1915 with two stocks, one hive blacks and one hive hybrids. The hybrids started off very early and strong, and filled twenty-two combs with brood by first week in May, when I divided them, as I wanted to increase my stock. In June I had the misfortune to lose two strong swarms in one day when I was away from home; one swarm from each old stock with both old queens, but I made six two-frame nuclei from queen cells found in the hives. The nuclei soon built up into good strong stocks. I broke up one nuclei stock into four, making in all twelve lots. I took all of them 3½ miles to the heather the last week in July. After this small start and large increase I secured 550 well-filled sections, and 25 lbs. extracted honey, which I have sold for £25 10s., this being the best return I have had from so small a start in my twenty-two years' bee-keeping experience. A. J. Hickman, Minstead, New Forest.

TRADE CATALOGUE RECEIVED.

Jas. Lee & Son, Ltd., George Street, Uxbridge, Middlesex; Bee Farms, Fulbourne & Wilbraham, Cambs.—This firm are as usual sending out a well-illustrated catalogue. Owing to the war and the enhanced prices of timber and other materials the price of most appliances will be found higher than usual, but under the circumstances this advance is very moderate. Customers will find the prices of all goods are as low as good material and workmanship will allow. The catalogue will be sent post free on application.

Queries reaching this office not later than FIRST POST on MONDAY MORNING will, if possible, be answered in the "Journal" the following Thursday. Those arriving later will be held over until the following week. Only SPECIALLY URGENT queries will be replied to by post if a STAMPED addressed envelope is enclosed. All queries must be accompanied by the name and address of the sender, not necessarily for publication, but as a guarantee of good faith. Correspondents are requested to write on one side of the paper only.

[9042] I have two stocks of Italian bees. Both are fairly strong, but one of them unfortunately lost its queen in the late autumn of last year, during which I lost several stocks from various causes. As my aim for the immediate future is *increase* rather than *surplus*, I shall be pleased and

grateful if you will kindly advise me as to the best manner of treating the two stocks I still have. Would it be best (1) to unite at the earliest suitable moment; (2) to nurse on and eventually requeen the present queenless stock; or is a still better course available?—D. E. B. DALE.

REPLY.—Your best plan is to unite the two as early as possible, as the bees that are queenless will enable the queen of the other stock to enlarge the brood nest at once, and you will be able to divide again early in the spring.

Notices to Correspondents

Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. All questions must be accompanied by the sender's name and address, not necessarily for publication, but as a guarantee of good faith. There is no fee for answering questions.

D. C. FORD (Barnet). *Commencing Bee-keeping.*—The earlier you order the hive the better. As soon as you receive it give it three coats of good oil paint, which will be well set by the time you get the bees. The W.B.C. hive is the best. Any appliance dealer will supply you with a complete outfit for beginners with either a W.B.C. or a cottage hive, according to the price you are prepared to pay. You cannot do better than get the "Guide Book," or if you want a cheaper book, "Bee-keeping Simplified" will give you information that will enable you to commence on right lines.

Suspected Disease.

NOVICE (Brecon).—(1) "Isle of Wight" disease. (2) You can extract the honey and use it for human consumption, as, if clean, it is quite wholesome. The bees were evidently suffering from the disease last year, and it would not be caused by the sugar.

MRS. KINGSTON (Ireland).—The cause of death was "Isle of Wight" disease.

"GARRISON" (Milport).—The trouble is "Isle of Wight" disease. You might try the Izal treatment.

C. H. ORCHARD (Earlsfield).—It is "Isle of Wight" disease. The queen is small, and judging from her appearance had not mated.

R. REDPATH (Berwicks.).—It is "Isle of Wight" disease.

Special Prepaid Advertisements

Two Words One Penny, minimum Sixpence.

Will aavertisers please read these Rules carefully in order to save trouble, as they will in future be strictly adhered to.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not permissible at above rate, but will be inserted at 1d. per word as* **"Business"** *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of 3s. per ½in., or 5s. per inch.*

PRIVATE ADVERTISEMENTS are only intended for readers having **Surplus Stock to** *dispose of.* **Driven bees, Nuclei,** *and* **Queens that are reared or imported for sale,** *are Trade Advertisements, and can only be accepted under trade terms.*

Advertisements must reach us NOT LATER than FIRST POST on TUESDAY MORNING for insertion in the "Journal" the same week.

Orders for three or more consecutive insertions in "The Bee Journal" entitle advertisers to one insertion in "The Bee-Keepers' Record" free of charge.

PRIVATE ADVERTISEMENTS.

WANTED, healthy swarms, May-June 10; price per lb.—Box XX, BRITISH BEE JOURNAL Office, 23, Bedford-street, Strand, W.C. v 29

BEES, late Lt. Guythers, 11 stocks in hives, complete, for sale.—Apply, Wm. H. MURRELL, Church House, Almeley, Herefordshire. v 27

BEE-KEEPER dead; complete outfit, including five hives, £2 the lot.—42, Dartmouth-road, Forest Hill. v 30

SEVERAL healthy swarms desired when ready, or skeps bought for immediate delivery; state price.—STANLEY, Huntleigh, Hadham Cross, Herts. v 31

EXPERTS wanted for North Cumberland; six weeks' tour commencing middle April; state experience and qualifications; thorough acquaintance "Isle of Wight" essential.—JOHN STEEL, 69, Broad-street, Carlisle. v 26

FOR SALE, drawn clover and heather honey; also heather sections.—J. STEPHENSON, Wath Farm, Scampston, Rillington, York. v 33

WANTED, guinea honey extractor, cheap; also Rymer's honey press.—J. STEPHENSON, Scampston, Rillington, York. v 34

FOR SALE, 2 cwts. extracted honey, in 28lb. tins; sample 4d.—SPENCE, East Witton, Middleham. v 32

FOR SALE, six good hives, 6s.; four larger, 8s. each all painted; in good condition.—ENOCH DAVIS, Llandudno. v 22

HOT-AIR incubators, for quick sale, at bargain price; 60-egg capacity.—SEADON, Stanley-road, Bromley, Kent.

PLANT NOW.—Willow herbs, 9 roots, 6d.; Limnanthes, 50 roots, 6d.; Ohio Sweet Clover seed, packets, 3d.—BOWEN, apiarist, Cheltenham. v 25

SEVERAL good hives with lifts, 7s. 6d. each; shallow frames and section racks, 1s. 3d. each; feeding bottles, 1s. each; excluder zincs, 9d., a few of each to clear.—H. T., "BEE JOURNAL" Office, 23, Bedford-street, W.C.

WANTED, cloth-bound copy "Bee-Keepers' Record." Vol. 7, year 1889.—HERROD-HEMPSALL, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

Editorial

BRITISH BEE-KEEPERS' ASSOCIATION.

The Council of the British Bee-Keepers' Association are anxious to obtain gifts of honey for the wounded soldiers in the London Hospital, where it is urgently needed both for food and medicinal purposes. They will, therefore, be grateful for gifts of same, no matter how small, from bee-keepers throughout the British Islands. It is unnecessary to explain our obligations to these brave fellows, who have sacrificed health and limbs for the sake of our country. Gifts should be sent addressed to the Secretary, B.B.K.A., 23, Bedford Street, Strand. The donors' names will be published in the "B.B.J."

W. HERROD-HEMPSALL,
Secretary.

HONEY FOR LONDON HOSPITAL.

Amount received ..... 227½ lbs.

The monthly meeting of the Council was held at 23, Bedford Street, Strand, London, W.C., on Thursday, February 17th, 1916. Mr. W. F. Reid presided. There were also present Messrs. G. S. Faunch, J. Smallwood, A. Richards, G. J. Flashman, J. Herrod-Hempsall, J. B. Lamb, G. W. Judge. Association representatives: Messrs. G. Bryden (Crayford), G. R. Alder and G. Horscroft (Essex), and the secretary, W. Herrod-Hempsall.

Letters expressing regret at inability to attend were read from Miss M. D. Sillar, Messrs. T. W. Cowan, A. G. Pugh, T. Bevan, C. L. M. Eales, and Rev. F. S. F. Jannings.

The minutes of the Council held on January 20th, 1916, were read and confirmed.

The following new members were elected: Mrs. Saint, Miss D. Mills, Mr. G. F. Stubbs, Mr. W. H. Prior, Mr. F. A. Woolley, Mr. A. Furness.

The following associations nominated delegates, and all were accepted: Derby, Mr. J. Pearman: Glamorgan, Mr. F. Gravil; Worcester, Mr. A. R. Moreton.

The report of the Finance Committee was presented by Mr. Smallwood, who stated that payments into the bank for January amounted to £29 7s. 6d., the bank balance at the end of January being £140 3s. 6d. Payments amounting to £14 0s. 8d. were recommended.

The report of the committee appointed to arrange for the annual meeting was presented. It was agreed to hold the meeting at Shearn's Restaurant, 231, Tottenham Court Road (nearest tube station, Goodge Street), on March 16th, at 1 o'clock. Conversazione at 5.30, at which a lecture will be given by Mr. W. Herrod-Hempsall on "Honey from the Cell to the Consumer." Tea will be provided for members and friends free at 5 o'clock.

The final examination was arranged for May 26th and 27th.

The annual balance-sheet and report was presented and passed.

Next meeting of the Council, March 16th, at Shearn's Restaurant, 231, Tottenham Court Road, London.

A DORSET YARN.

A week of cold winds, with some sunshine; the bees were out here on three days, but from only five out of 25 stocks; the others are gone, as are my neighbours'. I had a gentleman to see me from the Fenlands of Lincolnshire yesterday. He says that his and all his near neighbours' bees are all dead. His business is acres of white narcissus: violets do not flourish in his locality, but bees in that county have always been a great success.

There is one late swarm of yellow-banded bees, which shows great activity just now. They were the greatest robbers in the autumn, and now they are clearing out the other stocks of honey. The strongest stock of the local brown bees that have survived is one that I bought from a cottager in early August in a butter-box. Having made their own comb in their own way, they worked every moment of sunshine with that untiring energy the bee-man likes to see, and they are humming over the snowdrops, the peach blossom, and the withy. This brings me to the subject to yarn about this week. The *Salix* family (which is the botanical name of the withies) is, next to the hazel, the earliest of trees to bloom. This family is different to the hazel in that the male or polliniferous flowers, and the female flowers which ripen the seed, are to be found on separate trees. Here we see how necessary are the bees to carry the pollen from one tree to the other, and what is so remarkble to me is, though many varieties of the *Salix* are in bloom at the same time the bees going as they do to all the different trees yet they do not cross-pollinate the different varieties. All the seeds which grow produce the same sort of withy as the parent. It is so different with many other flowers: the bees mix up all sorts of colours in the different genera they visit. This family is largely grown as

basket-making, and when planted from cuttings (which is the usual way of propagation) if we want them to grow and flower, cuttings of the male plants should be inserted in the soil from October to April. They will soon root, and these have the rich yellow pollen-bearing flowers, and look by far the handsomest. So easy to root are the withies I have known recently-cut rods used for staking runner beans in the summer all root freely. Here by the River Stour this family of trees is plentiful and very pretty, and mostly keeps in blossom up till Easter, which the children gather on Palm Sunday, calling it palm bloom. The trade in making baskets has drifted largely over to France and other Continental countries. The plum baskets called sieves, in ¼, ½ and round bushels, come mostly from France. These prove this class of trees to be valuable to the fruit-grower.—J. J. KETTLE.

CRAYFORD AND DISTRICT BEE-KEEPERS' ASSOCIATION.

ANNUAL MEETING.

The 9th annual meeting of the Crayford and District Bee-keepers' Association was held at St. Paulinus Hall, Crayford, on the 7th February, 1916. Including representatives from the outlying districts, there were about thirty members present.

The secretary (Mr. J. M. Bates) presented the annual report and balance-sheet for 1915. Three very successful meetings had been held during the year: the demonstration at Maypole House in June, the Honey Show, also at Maypole House, in August, and the winter meeting at Crayford on November 22nd, when the competition essays were read. This new departure proved highly successful. In July a meeting at the Apiary, Zoological Gardens, was organised, but this was marred by rain.

The finances of the association were in a very satisfactory state. The general account showed a balance in hand of £4 5s. 9½d. against £1 0s. 2d. the previous year, also a balance of £1 7s. 1d. Refreshment Fund account. Mr. Prior, one of the auditors, in commenting upon the balance-sheet, stated that although £3 had been advanced to the Co-operative Restocking Scheme the balance was greater than it had ever been before, indicating a very healthy position and reflecting great credit on those responsible.

Experts' Report.—The experts' report, read by Mr. Judge, stated that the past year had been successful for bee-keeping in the North-West Kent district. The epidemic of "Isle of Wight" disease seemed to have spent itself, and bees are now flourishing. From the returns sent in there are 185 colonies wintering. In addition to a very large increase in the number of stocks established last season, 3,524 lbs. (31½ cwts.) of honey had been produced, or about half the quantity produced in normal seasons.

Re-stocking Scheme.—The Re-stocking Scheme Committee (Messrs. Judge, Bryden, and Barnes) submitted a report which showed that excellent progress had been made in establishing the apiary at Maypole House during the past year. Eight stocks are now available for breeding purposes. A hearty vote of thanks was accorded Mr. and Mrs. Knight not only for allowing the association the use of their grounds for the apiary, but also for the active interest they had taken in the association's affairs.

Delegate's Report.—Mr. Bryden stated in his report that he had attended every meeting of the Council of the B.B.K.A., and at the Royal Show at Nottingham the chairman congratulated the Crayford Association in having a representative present.

Election of Officers.—Mr. Alfred Dewey, of Wilmington, was appointed president for the ensuing year in place of Mr. S. K. Keyes. The vice-presidents were re-elected *en bloc* with the addition of Messrs. S. K. Keyes, C. W. Knight, J. M. Bates, and E. D. Till. The Members of Council were also re-elected *en bloc*, with the addition of Dr. C. Courtenay Lord (Orpington) and Mr. A. C. Paulin (Bexley).

Mr. J. M. Bates, who had combined the office of hon. secretary and treasurer since the establishment of the association, stated that he did not wish to be re-elected secretary on account of failing health, but offered to continue the treasurership. He proposed that the assistant secretary (Mr. Judge) be elected hon. secretary in his place. Mr Stoneham, in seconding, expressed regret that Mr. Bates found it necessary to give up the work, and thanked him on behalf of the association for his past services. Mr. Bates was unanimously elected hon. treasurer, while Messrs. G. Bryden and W. H. J. Prior were appointed delegates to the B.B.K.A., the latter being assistant secretary.

Committees.—The committee of experts were re-elected, with the addition of Mr. G. H. Barnes. Messrs. Judge, Bryden, and Barnes were reappointed to carry on the restocking scheme, and they were suitably thanked for their past services.

The chairman announced that Mr. Bryden in November last had been successful in obtaining the B.B.K.A. Intermediate Certificate of Proficiency in Bee-keeping, and he congratulated him.

At the conclusion of the business a most interesting lecture by Mr. V. E. Shaw was given entitled "The Scientific Aspect in Apiculture." The lecturer indicated many

ways in which science could be applied to bee-keeping. The word was not so terrible as it appeared; in fact, it simply meant the application of a system based on knowledge and experience. In apiculture it was necessary to apply such scientific principles if the best results were to be obtained.

A vote of thanks to the lecturer and to the chairman concluded the proceedings.

SHEFFIELD AND DISTRICT BEE-KEEPERS' ASSOCIATION.

ANNUAL MEETING.

The second annual general meeting of the above association was held on Thursday, February 10th, at the Wentworth Café, Sheffield. The president, Mr. M. T. Garnett, occupied the chair. There was a very good attendance of members, and the secretary, in presenting the report, commented on the very good attendance at the meetings held throughout the year. The balance-sheet, which was unanimously adopted, showed a cash balance in hand of £7 9s. 7d. Several new members signified their intention of joining the association, which shows every sign of prosperity, especially in view of the circumstances prevailing at the present time.

The following officers were elected:—Mr. W. Garwell was re-elected secretary and treasurer, but in the event of being accepted for military service when called to the colours Mr. T. Nelson was elected to take up the office. Committee: Messrs. S. Livsey, E. Garwell, W. E. Tomlinson, P. Ridge, T. Beever, J. Morewood, E. J. Outram, F. Grafton, and Palmer. Messrs. W. Ball and C. M. Hansell were also elected vice-presidents of the association.

A prize drawing had also been arranged, free to all paid-up members for 1915. Seventeen prizes were given by members and friends. At the conclusion of the meeting a hearty vote of thanks was proposed to the chairman for presiding, and also to all those who had so generously helped to make the association prosper in the past year.—W. GARWELL, *Hon. Sec.*

GLAMORGANSHIRE BEE-KEEPERS' ASSOCIATION.

ANNUAL MEETING.

Alderman John Jordan (Llansamlet) presided at the annual general meeting of the above association, held at Swansea, February 12th, 1916. There was a good attendance, including Mrs. Jordan, Mrs. Kirkhouse Jenkins, Mr. and Mrs. W. T. Gunter, Mr. and Mrs. Wm. Morgan, Mr. and Mrs. E. Gibbon, Miss Harris, Miss Lloyd, Messrs. Biobier, I. E. James, Jas. Lloyd, and W. O. Jones (Cardiff). A letter was read from Mr. F. Gravil (Cardiff) regretting his absence.

The chairman, in moving the adoption of the report and balance-sheet, welcomed the meeting to Swansea. Although the immediate surroundings were not particularly favourable to bee life still there were outlying districts where bees could thrive, and he considered bee-keeping should be more extensively cultivated. Especially was this necessary now, when the Board of Agriculture were pressing us to utilise every plot of land available to provide food for the people. The same argument applied to the bee industry. Honey was very useful, and sugar being dearer honey was also more valuable.

As a County Councillor he was glad to say that the Association had been assisted by grants for many years, and in 1914 the grant had been increased from £50 to £70. Also they had engaged the services of Rev. H. Morgan as C.C. Bee-keeping Expert, and a scheme had been arranged for defraying the cost of examinations of candidates for B.B.K.A. certificates and for prizes for manipulating bees, &c. But owing to the war all public bodies were obliged to reduce their expenditure under these heads, and therefore they had to suspend the payment of the usual grant until the war was over. He hoped the organisation would survive and thrive, and when the war ended he would do all in his power so that the intention of last year should be carried out. He congratulated the officers and the county expert on their successful work.

In reference to "Isle of Wight" disease he advised members to obtain the Board of Agriculture's Leaflet 253, and said legislation was necessary to give local authorities power to deal with bee diseases, and when time permitted he hoped that legislation in this direction would be carried out.

Rev. H. Morgan (C.C. expert) seconded the adoption of the report, and said that although his engagement with the County Council was terminated he would still do anything he could, and his services would always be at their disposal. He appealed to members to remember the voluntary work done years ago by some of the older bee-keepers before any encouragement was given by the County Council. He was still of opinion that the outbreak of "Isle of Wight" disease in the county was due to importation. He strongly advised new beginners not to start now, and if the bee-keepers purchased stocks to obtain them from the west of Wales.

Mr. E. Gibbon supported the motion, and the report was adopted. Mr. Hedger

Wallace remarked that the reason given for the Bee Diseases Bill failing to pass was that it was opposed by the parent association, the B.B.K.A.* He suggested propaganda work in securing financial support from friends in sympathy with the bee industry in order to tide over the period of the suspension of the County Council grant. In that way the experts and the machinery would be kept going, and he hoped every bee-keeper in the county would still secure a visit from the local experts. The Right Hon. the Earl of Plymouth, P.C., C.B., was re-elected president; Mr. John Jenkins auditor, Mr. F. Gravil treasurer, and Mr. W. J. Wiltshire secretary. Rev. H. Morgan was elected representative on the Glamorgan Chamber of Agriculture, and Messrs. W. Meyler Thomas, J.P. (Llantrisant), and F. Gravil (Cardiff) representatives on the B.B.K.A.

An application for a subscription from Cumberland and Westmorland Association towards the estimated expenses of an experiment with "Isle of Wight" disease was refused.

[* Probably all our readers are aware that this is entirely wrong, but in case there are others who are under this erroneous impression we take this opportunity of saying that far from opposing the Bee Diseases Bill the British Bee-keepers' Association did all in its power to get it passed, and no one would more heartily welcome such an Act than the parent Association.—EDS.]

CORRESPONDENCE.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

THE SPREADING OF DISEASE.

[9236] The various correspondents writing about "Isle of Wight" disease and its side issues enlighten us to some extent as to how the disease is spread so rapidly over the whole country, and who spreads it, but I do not remember a more self-accusing case than that appearing in the BRITISH BEE JOURNAL of February 10th, written by Mr. Herbert Mace. Those who are accusing brood foundation may now righteously turn their wrath and indignation on Mr. Mace when he tells how he not only "hived bees on diseased combs in a diseased hive, and fed with diseased honey, but when other stocks died of the disease, even allowed his remaining bees to rob most of their stores."

I wonder how many of his neighbours' bees helped in the robbing, and how many of their stock of "not immune" bees succumbed, and how many neighbouring stocks these in turn passed it on to, and so *ad infinitum?*

This dreaded scourge is now devastating my own district, making a clean sweep, and as, unfortunately, there is no law to meet the case, I am appealing to all bee-keepers around to at once burn all bees, combs, and fittings of hives lost, and to use the utmost care in putting out of reach of other bees every article which has been in contact with the disease. Now what effect will this advice have when a man of the standing and experience which I believe Mr. Mace to have sets the example he does?

I am well aware that he did it to prove his theory of the "immune bee," but it is exceedingly dangerous to induce others, less experienced and capable, to follow in his steps, to the detriment of the whole community of bee-keepers.

I would like to see an appeal, set in large type, standing continuously in the BRITISH BEE JOURNAL advocating the complete isolating of infected hives and burning of their contents.

If only the same amount of care has been given to finding a cure as to preventing the spread of the disease, then no wonder we are still waiting for a remedy. Mr. Mace asks for "D.M.M.'s" opinion. I sincerely hope that, apart from the question of "immune bees," he will strongly disapprove of what was a most foolish, and as regards neighbours a thoughtless and selfish, experiment.—FRANK HATTON.

"ISLE OF WIGHT" DISEASE AND FORMALIN FUMES.

[9237] Mr. C. H. Heap in his interesting notes (p. 46, Feb. 10th) suggests that I may be wanting to try the effect of formalin solution on diseased brood combs. Nothing was further from my thoughts. I quite agree with him that the experiment would be more trouble than it is worth. What I wanted to know was whether, in the case of bee appliances that could not be disinfected by a blow lamp without

injury, a strong solution of formaldehyde could be guaranteed to destroy the spores of *Nosema apis*. I think this question can only be answered by an experiment in a bacteriologist's laboratory.

At the present time I have about 200 drawn out shallow combs in perfect condition. These were taken during the latter part of last July from stocks which were at that time evidently affected with the "Isle of Wight" disease, though no "crawlers" were seen until about ten days *after* the last super was removed. Soon after this the disease asserted itself in earnest, and during September and October all my stocks, with the exception of two, were destroyed, burnt, and buried. The shallow combs referred to have for several weeks been subjected to the fumes of formalin vapour in an air-tight compartment, and I do not propose using them again until the summer of 1917. I do not believe that there is much chance of any spores that may exist germinating after a period of nearly two years, and to save destroying the combs I propose to take the risk; the formalin vapour must to a certain extent reduce the vitality of the spores.—I. BIGG-WITHER.

BLACKS *v.* ITALIANS.

[9238] Now that the ravages of the "Isle of Wight" disease have so denuded Great Britain of bees the question as to the best ways and means of restocking the country must be of primary importance.

As Italians are claimed to be more resistant to foul brood than other races, is it not more than likely that the same would apply to "Isle of Wight" disease? I know that many bee-keepers in the Old Country are prejudiced against Italians, mainly on account of their excessive swarming propensities, and to the cappings of their combs not being equal to that of the Blacks. The first of these objections can be overcome by adopting a suitable system of management. Bee-keepers who have tried Italians and given them up have often, I think, lost sight of this fact, and have run them along on the same lines they have been in the habit of following in the case of the Blacks. Italian queens, being so much more prolific than the latter, require a proportionately larger number of brood combs. Here we allow our queens, which are nearly all Italians of full blood, a brood chamber consisting of two storeys, each containing ten Langstroth frames. These frames are three and a half inches longer and half-an-inch deeper than the English standard frame. Even this occasionally, in the case of extra prolific queens, is found to be hardly sufficient. The super accommodation, as a rule, is about double that of the brood chambers.

With regard to the capping question this depends entirely on the strain of bees one gets. In all the hundreds of hives I have examined in this Province it is the exception rather than the rule to find sealed honey in which an air space is not left by the bees between the honey and the capping. This is, no doubt, to be accounted for by the fact that the Italians here were originally introduced from the United States, where the objectionable trait of close sealing has been practically bred out and eliminated. In view of this I would strongly recommend bee-keepers in the Old Country to obtain queens from this source. The Italians are the most beautiful bees in existence, gentle and good honey-gatherers, hardy, and it is a pleasure to handle them, in comparison with most of the Blacks. We have no difficulty in wintering them here out of doors, where the thermometer generally goes down for several days a few degrees below zero, and the hives are snowed up for three months out of the twelve.—W. J. SHEPPARD, Nelson, British Columbia.

MAKING A NEW START.

[9239] I have been reading the "British Bee-keepers' Guide Book," 16th edition, also the new "Bee-keeping Simplified," and have thoroughly enjoyed them, but I have got the fever. Although over 70 years of age I must again become a bee-keeper. Many years ago I was led astray by a discussion in the "Journal of Horticulture," I believe, betwixt the straw skeps and the bar-frame hive, the late Mr. Pettigrew taking the side of the skep, and, I believe, Mr. Cowan the bar-frame hive. I fell into the skep, as it were, and years after regretted having done so. However, eventually I lost all my bees, but although bee-keeping has now become much more complicated and costly, the results are greater by far, and the complications have become very much simplified by the above-mentioned books. The 6d. one is so clear for the novice and would-be beginner. I shall try to procure a good stock the end of next month as I was much disappointed last spring, having lots of young fruit trees and I never saw a single bee on the bloom, so I am going in for honey and also more fruit.—GEO. SIMPSON.

COMMENCEMENT OF WORK FOR 1916.

[9240] As I have not seen any report in the BRITISH BEE JOURNAL of bees making a start to work I thought it might interest some of its readers to know that mine were flying very strongly on February 10th, 12th,

and 13th. As soon as I saw them out I put some artificial pollen in my solar wax extractor and raised the glass about 4 inches on some blocks. The bees quickly found it out, and seemed very happy in loading up and carrying it home for about four hours each day, whilst the sun was very bright. They covered the chaff on the 12th they were so eager. I have 18 stocks in my home apiary: 16 of these are first-cross Italians, all headed with 1915 queens.

I also put a pan of water for them, and several bees came to carry some to their hives. My garden is very sheltered, with a 10ft. wall to north and east.

I have 11 hives in three different places, about ¾ to 1 mile away. I went to look at these and found only a few bees flying, but noticed some had a little yellow pollen, which I think was gathered from gorse, as there is a big common near them with a few bushes in flower.—RICHARD LING, Briston, Melton Constable.

HONEY IMPORTS.

The registered value of honey imported into the United Kingdom during the month of January, 1916, was £8,207. From a return furnished to the BRITISH BEE JOURNAL by the Statistical Office, H.M. Customs.

Notices to Correspondents

Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. All questions must be accompanied by the sender's name and address, not necessarily for publication, but as a guarantee of good faith. There is no fee for answering questions.

T. WHITE (Porlock).—*Transferring bees from boxes to frame hives.*—When the box is becoming crowded with bees fit up the bar-frame hive with frames and full sheets of foundation. Stand the box of bees and comb on the top of the frames, placing the whole on the site previously occupied by the box. Make the joint between box and frames secure so that the bees have to go down through the frames and use the entrance to the frame hive. If the box is smaller than the tops of the frames lay strips of oilcloth over the exposed portions of the latter. Should the box be the largest, take a thin board the size of the box, or even a little larger, and cut a hole about 8 inches square in the centre, place this on the top of the frames, and stand the box on the top. When the bees have worked on the foundation and the lower combs contain eggs and larvæ the queen should be confined to them by a queen excluder. If she cannot be found there, you will have to drive the bees from the box until she is secured and placed on the lower combs. The box is then replaced and allowed to stay for 22 days. In that time all the young worker bees will have emerged from the cells, and the box may be finally removed, leaving the bees established in the frame hive.

CANON BARTRAM (Surrey).—Apply to the secretary of the Surrey Bee-keepers' Association, Mr. F. B. White, Marden House, Redhill.

W. S. B. (Hounslow).—A "stock on frames" would consist of bees, queen and combs. If there are fewer than ten combs you will have to purchase frames and foundation to make up that number for each hive. Some spare frames and foundation are always a good investment.

OPTIMIST (Cards.).—We still prefer the natives.

Suspected Disease.

E. CHILD (Woodford Green).—The bees are suffering from "Isle of Wight" disease.

P. M. THOMPSON (Cumberland).—It is "Isle of Wight" disease. The queen appears normal, but had been dead some time and become dry, and therefore small.

Special Prepaid Advertisements

Two Words One Penny, minimum Sixpence.
Will advertisers please read these Rules carefully in order to save trouble, as they will in future be strictly adhered to.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not permissible at above rate, but will be inserted at 1d. per word as* **"Business"** *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of 5s. per ¼in., or 5s. per inch.*

PRIVATE ADVERTISEMENTS are only intended for readers having **Surplus Stock to** *dispose of.* **Driven bees, Nuclei,** *and* **Queens that are reared or imported for sale,** *are Trade Advertisements, and can only be accepted under trade terms.*

Advertisements must reach us NOT LATER than FIRST POST on TUESDAY MORNING for insertion in the "Journal" the same week.

Orders for three or more consecutive insertions in "The Bee Journal" entitle advertisers to one insertion in "The Bee-Keepers' Record" free of charge.

PRIVATE ADVERTISEMENTS.

WANTED, shallow frame combs, clean condition, healthy.—VINCENT, 132, Croydon-road, Anerley. v 36

BRITISH BEE-KEEPERS' ASSOCIATION.

The Council of the British Bee-Keepers' Association are anxious to obtain gifts of honey for the wounded soldiers in the London Hospital, where it is urgently needed both for food and medicinal purposes. They will, therefore, be grateful for gifts of same, no matter how small, from bee-keepers throughout the British Isles. It is unnecessary to explain our obligations to these brave fellows, who have sacrified health and limbs for the sake of our country. Gifts should be sent addressed to the Secretary, B.B.K.A., 23, Bedford Street, Strand. The donors' names will be published in the "B.B.J." and RECORD.

W. HERROD-HEMPSALL,
Secretary.

HONEY FOR LONDON HOSPITAL.

Amount received	227½ lbs.
Mr. W. Thorne	1 lb.
Total.....	228½ lbs.

ROYAL AGRICULTURAL SOCIETY OF ENGLAND.

Patron—HIS MAJESTY THE KING.

The Royal Agricultural Society of England has now issued the Prize Sheet for live stock, poultry, produce, implements, etc., at the Show of the Society to be held at Manchester from Tuesday, June 27th, to Saturday, July 1st. The total value of the prizes offered (inclusive of champion prizes, special prizes, and medals) is £10,000, of which £1,426 10s. are contributions from the Manchester Local Committee, £2,571 from various Breed Societies, and £273 from other sources.

The British Bee-keepers' Association will continue their prizes for Hives and Honey. Schedules, for these classes only, may now be obtained from the Secretary, Mr. W. Herrod-Hempsall, 23, Bedford Street, Strand, London, W.C.

BLURTS FROM A SCRATCHY PEN.

"ISLEOWIGHT-IOSIS."

"The time has come," the Walrus said,
"To talk of many things,
Of shoes—and ships—and sealing-wax,
Of cabbages—and kings."

Which sentiments, being paraphrased so as to make them fit our bee-keepers, means that we are now just beginning to rub our eyes after the long winter sleep, to turn ourselves round, and consider if it were not better to begin to prepare for coming possibilities. And, probably, one of the very first things done is to have a look at the current issue of our JOURNAL to see what our neighbours are doing.

Very often closing up the bees for the autumn means closing up the BEE JOURNAL for the winter. If it *is* taken, it is skimmed over just to get the cream of it, and then put aside on the growing pile of its predecessors. Now, this is an unwise practice. There is a superabundance of cream in the JOURNAL during the winter months—'cause why? Because at that time our writers have more time to give to earnest and studious work. But I am wandering. I left our bee-keeper rubbing his eyes. Convinced that there is wisdom to be found, he will look for it. He plods patiently through the editions of, say, January and February, 1916 (any other months will do just as well). Then I am afraid the last state of my awakened friend becomes much worse than the first. Nervous of an attack of "Isle of Wight" disease he seeks consolation and advice. Smith assures him that he may throw his trouble to the winds—the only and certain cure is "Killspore." *He* has tried it and never does it fail. Brown flatly contradicts; he has used "Killspore," too, and it is rubbish. Jones writes that *the* only radical means to wipe out the disease is destruction of the whole apiary, lock, stock and barrel, a ploughing contest over the ground where once the apiary stood, and a series of disinfecting baths for himself to prevent carrying contagion. Robinson replies that Jones must be suffering from nervous breakdown to write such nonsense. "Immune bees—immune bees" is his cure (goodness knows where they are to be got from). Secure these and his apiary will overflow with honey. Distracted by such opposite opinions our friend rushes to his hives, finds a few "crawlers," which he posts in a match box to the BEE JOURNAL. "Every symptom of the 'Isle of Wight' disease" is the comforting reply. In despair he adopts, as nearly as circumstances permit, Jones's advice, and retires from bee-keeping.

I don't think this is an overdrawn picture. The tragedy occurs before us every day of our lives. I should have no difficulty any day in finding a dozen actual examples of the main facts, and every expert who moves among his neighbours knows it is the truth—Gospel truth. Yet we are obliged to look on and to fold our

hands. From this dreadful tragical inability to help do there not arise facts which hit you stunning blows in the eyes? *Fact No.* 1. Unless some means of eradicating this disease is discovered, bee-keeping will be a business in which no one will care to invest their money. It is not good enough to put a hundred or two pounds of capital in an affair which may be destroyed in a week. Putting aside the money value of the honey produced as but a secondary interest, *we* know what a loss the absence of bees would be to fruit growers and agriculture. *Fact No.* 2. If the Government, or a department of it, interests itself in the eradication of cattle disease, swine fever, hydrophobia, mildew in gooseberry trees and other plagues of agriculture, what possible reason is there that they should not interest themselves in the diseases of bee-keeping *to their utmost eradication*? Thanks for what it has already done, but *Fact No.* 3. It is beyond the financial capabilities of any association, or all the associations together, however willing they may be to help, to carry the investigation *to a successful end.* Nor have they the facilities. It is, therefore, a national claim, a fit object for the national funds, and the Government is the only power capable of enforcing the decisions it arrives at, whatever they may be. Unless there is a "mailed fist," or we will even say a 4-oz. boxing-glove, to enforce, the chaos of Smith, Brown, Jones and Robinson's methods will go on as farcical as ever, and we shall never get any "forrarder." J. SMALLWOOD.

ANCIENT BEE LITERATURE.

II.—GODS AND BEES (*continued*).

Cupid, the God of Love, of all the Gods, is the one most admired and sung of by the poets. Whether they praise or blame, the little chubby boy with the bow, arrows, quiver, and wings goes on smiling his tender or cynical, artful smile. Anacreon and Theocritus in olden times, Tom Moore and Spencer in more modern times, tell us of the "urchin of the bow and quiver" shooting his darts, their points sometimes dipped in honey, at other times in gall. His own mother, Venus, describes him thus: "Like honey is his voice, but his heart is gall; a sweet tongue has he, but the truth is not in him." We have many references to his evil habit of overturning bee-hives in order to rifle the honey, for he seems to have had a sweet tooth in his head. Once, stung while engaged in such an escapade, when he comes to her to complain of the evil effects of the sting poison, his mother does not condole with him in his sufferings, but points out that if so tiny a creature as the bee can produce such pain, what must be the effect of his own cruel arrows when shot into the human heart? Anacreon in his ode places him on a bed of roses when the bees sting him, which is a more poetic position than if he were employed as a mere honey thief.

"Cupid once upon a bed
Of roses laid his weary head;
The bee awaked with anger wild,
The bee awaked and stung the child."

The shepherd god Aristæus, the son of Apollo and Cyrene, made so familiar to many bee-keepers by his story told in Virgil's 4th Georgic, first taught the culture of olives and the "management of bees." Like many modern bee-keepers, his knowledge of the art of apiculture failed to enable him to preserve his own bees. Some fell disease carried them away, and, greatly grieved, he sought his mother's aid in distress and tears. She, goddess though she was, could not redress his wrongs, but sent him to Proteus, a sea-god who dwelt mostly along the shores of those seas where our warships now ride armed to the teeth. Under compulsion and inspiration Proteus tells him of his sins and how to remedy them and nullify their evil effects. In the end Cyrene advises him of a plan whereby he will recover from this melancholy annihilation of his bees. Then we have the familiar story of the generation of bees. He takes four bulls, conspicuous for beauty and grace, kills them, buries them, and in time—"Behold a prodigy unexpected and wonderful to tell: bees humming through the macerated flesh, bursting forth and floating aloft in enormous clouds, and now swarming together on a tree, hanging down in a grape-like cluster from the bending boughs." A real swarm of bees, no doubt, clustered there, the flies which rose from the corrupted carcases having, however, winged their way into space! The swarm became Aristæus, to propagate their kind and yield him rich stores of honey, and additional colonies; the drone flies disappeared to live their brief scavenging life.

According to Homer and Hesiod, Apollo was the son of Jupiter, already dealt with under his Greek name of Zeus, and his sister was the well-known goddess Diana. Apollo was known as the sun god. And as bees are creatures of the sunshine—their very being depending on its benign life-giving rays—it is no marvel that they were considered as being under his very special care. Therefore, we have him described as the god or guardian of flocks and herds, and more particularly bees. It was only natural that this should be, because during his early years he was made much of by several goddesses, and one of the latter, Themis, fed him with nectar and ambrosia. He had several temples dedicated to his honour,

and one of these was constructed of wax and bees'-wings. Bees brought him a yearly offering about the end of July. Being the sun god we naturally find Apollo worshipped all over the old Roman, Grecian and Egyptian empires—those lands where the sun's rays almost perpetually smile.

Pan, amongst the Greeks, was recognised as the chief god watching over fields, pastures, flocks, herds and forests. He is generally represented as being fond of music, and the invention of the well-known pipe of Pan, or shepherd's flute, is attributed to him. While he piped his way along he was supposed to take special charge of the fruits of the fields, and for this he received offerings of honey. One writer says: "I will set out eight bowls of milk for Pan and eight bowls of the richest honey-comb"; and another tells us he was the chief patron of all persons occupied in the care of cattle and of bees. We are also given to believe that at times he used the mellifluous tones of his pipe or flute as a substitute for the tinkling of brazen vessels whereby swarms were stayed and compelled to settle preparatory to being hived. At other times the sounds he made were repellent rather than alluring, and some authorities would make him out to be the prototype of a certain very black gentleman whose presence or influence none of us should desire to court!

Even as a child the god Adonis was so beautiful that more than one goddess quarrelled over his possession. Jupiter therefore decreed that he should spend so many months in the lower world and so many in the upper. This refers, of course, to the beautiful legend of the Seasons, to be again referred to when dealing with Ceres. A very highly honoured feast was held every spring when Adonis returned to Venus; indeed, it was one of the most popular of all the god-festivals celebrated annually all along the northern shores of the Mediterranean. Generous libations of honey were then bestowed on this god. Theocritus tells us that "All the dainty cakes that women fashion in the kneading tray with wheaten flour, all that is wrought of honey-sweet, are set before him." Also we learn that waxen images of fruit and flowers were carefully prepared and presented to this god at his popular feasts.

Saturn was another ancient Italian divinity who presided over apiculture, and blessed the labour of the sower. He taught men the "simple life," and the poets sing of his reign as the "Golden Age," and the ideal of earthly happiness. Virgil's Corycian, whose contentment of mind equalled the wealth of kings, might be taken as a type of what Saturn desired to convert his husbandmen into. One can picture him with his numerous progeny of swarms, and see him "squeeze and strain the frothing honey from the pressed honeycomb"—a regular apiarist.

We are told that Saturn at one time was ensnared by Jupiter, who feasted him on honey so liberally that he collapsed as effectively as if he had drunk over-liberally of wine. The Saturnalia was an ancient festival held in honour of this god, when the whole populace enjoyed a holiday; and some trace the modern carnival as a simple survival of these wild orgies of eating and drinking. It was originally really a feast of ingathering of the fruits of the earth, or one somewhat similar to our harvest homes.

"M."

(*To be continued.*)

DISEASES, PLANTS, AND SOILS.

By Tarlton-Rayment, Briagolong, Gippsland, Victoria, Australia.

Author of "A Treatise on the Bees and Nectariferous Plants of Australasia."

(*Continued from page* 37.)

The ground flora that frequents the soil described is characteristic. "Flatweed" (*Hypocharis radicata*), "Pincushions" (*Scabiosa maritima*), "Wild Sage" (*Salvia verbenaca*), etc. (See No. 1.) [The illustration of the test tubes graphically depicts the varying soils and the accompanying plant life.]

The grey sandy loam—No. 2—certainly produced stunted "cape weed" (*Cryptostemma calendulacea*) and "Dandelion" (*Taraxicum officinale*), but the pollen—except during prolific seasons—would very probably be deficient in nitrogenous protein. The "Flatweed" pollen is remarkably poor in food value during a droughty year; this has been proved by analysis. The "Red-box" eucalypt is a splendid honey tree when conditions are right, and it does yield considerable creamy pollen, but during the "resting" of the ground there is little or no pollen, though there may be considerable honey. Whether the nectar secreted during these periods is equal to that of a bountiful season as bee-food has not been determined, but an interesting study is open for some well-equipped investigator. The honey from "Red-box" is remarkably free from albuminous matter. It must be remembered that the indigenous "gum trees" frequently yield enormous crops of honey, but the bees will at times dwindle down until strong colonies are reduced to mere nuclei. This is noticeable in "Yellow-box" (*Eucalyptus melliodora*) forests. This species yields little or no pollen, while the honey is almost devoid of albumen.

Bees located on soils represented by

Nos. 3 and 4 do not die out in the manner described, and the writer has conclusively demonstrated that hives taken from such clover country into forests with soils of the Nos. 1 and 2 classes will *not* die out while the original stores are available, but will continue to thrive even while surrounding apiaries are completely devastated. When the new supplies are drawn upon depopulation rapidly ensues.

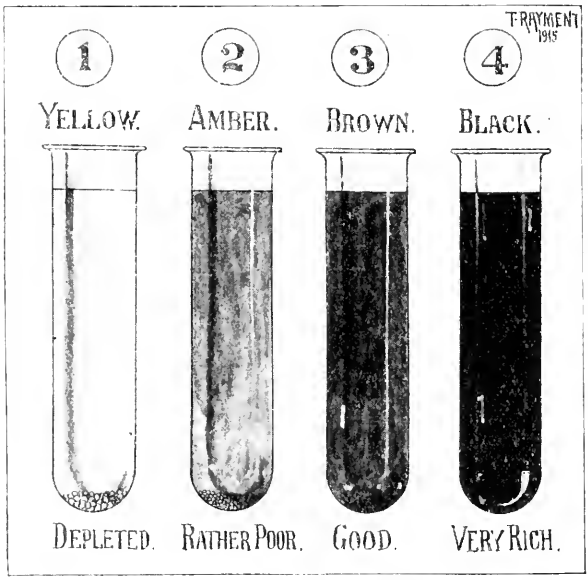
It has been suggested by some apiarists of long experience that the bee-farmer so situated should plant a grove of some special trees to yield pollen in early spring. Indeed, the advice to cultivate some special crop for pollen or honey is not infrequently given in the pages of the bee journals, but in spite of such eminent authorities, and in the face of what appears to be such a feasible way out of the dilemma, the writer unhesitatingly denounces such advice as wrong, distinctly wrong, and in direct opposition to the fundamental teachings of agricultural chemistry and botanical biology. The distinctive plant life of each geological formation is the type that time has evolved as the fittest species for the situation. Such flora has special adaptations that peculiarly assist it in its various functions, and no exotic species can possibly compare with it for the economical and comprehensive utilization of the available plant food.

In what way is it possible for an introduction to furnish the bees with life-giving elements when the indigenous plants fail? The writer is unable to say.

What better pollen could be desired than that of the "Wattles" (*Acacia*)? When the season is kind, it is remarkably rich in proteid, as analysis has proved, and wonderfully abundant, yet even this floral prodigy must deteriorate when exhaustion of the soil takes place.

It may reasonably be asked why bees ever prosper on depleted soil, to which I would answer, the supply of certain essentials is not fixed, it varies, as any cultivator is well aware. When the supply of phosphoric acid runs out the wheat crop diminishes. Is not this comparable with the nitrogenous element? A series of bountiful years provide a run of heavy honey flows, with pollen of high food value, and insect life is vigorous and abundant. This desirable period entails a severe drain on the soil's limited store of plant food, and is surely followed by a longer or shorter period of rest to recuperate, according to the plants' ability and the variable nature of the climate, and the topographical conformation of the country.

This resting period may produce honey and pollen, but the essential deficiency is there notwithstanding, and bees die. Is it reasonable to suppose that exotics planted in the vicinity of the apiary would or could act differently to the native plants? The "D.T." is a condition existing and brought on when the



TEST OF SOILS FOR NITROGEN.

earth rests. The food fed to the royal mother is lacking in nutriment, eggs are laid, the chyme fed to the young larvæ is of inferior quality, and the imago enters upon its life's work poorly nourished, and suffering from physiological starvation, it swiftly dies.

With regard to the half-dozen surviving colonies; they proved that the ability to gather stores from a greater distance than the others enabled them to thrive, but they could not have done so unless the plants they visited grew on soil that had recuperated or else had not been depleted. Three miles from a yard that succumbed to "D.T." there was a different stratum of subsoil, and bees did remarkably well. Bees do not die on the soils of Nos. 3 and 4, because such land is better supplied with nitrogen, and the drain is not so heavy, therefore they recuperate before the critical period is reached. When the soil rests, shift the bees on to country of another character.

QUEEN-REARING AND INTRODUCTION.

(*Continued from page* 54.)

Needless to say, the queen-rearing hive must contain a very strong colony; in fact, I always use one that will work in the supers at the same time, as seen at Fig. 44. The length of the hive permits the queen-rearing compartment to be manipulated without disturbing the supers. To avoid this, when a rearrangement of the brood is necessary the young brood is obtained from another stock which is not supered. If queen-rearing by this method is started very early before there is a good honey flow the stock must be fed by means of a bottle feeder exposing about three holes.

I will now describe briefly two plans adopted by the late Mr. Pratt in America and known as the Swarthmore Method, from whose works, by the courtesy of the A. I. Root Co., of Medina, Ohio, I cull the necessary matter and also some of the illustrations.

In most of his operations Mr. Pratt used the flanged cell cup, as illustrated at Fig. 45, the cavity of which is filled with molten wax and the cell base impressed while it is still warm by means of a forming stick, as already described; or when hundreds of queens are being reared, as in his case, a small machine, Fig. 46, called the Grace Cell Compressor, is used to facilitate the work. The cells are obtained as follows: A swarm-box with the bottom made of perforated zinc only to provide ample ventilation is fitted with a solid top in which a couple of slots are cut shouldered at each end to take a cell bar, having about sixteen holes bored in it to carry the cell cups, so that the flange rests on the top and prevents them slipping through. Blank bars to replace these and prevent the bees escaping are also made; both are illustrated at Fig. 47. The box with two lids, showing in one the slots empty and in the other filled, is seen at Fig. 48. At ten o'clock in the morning drop the cell bars into the slots in the lid of the swarm-box and fill each of the holes in the two bars with nicely compressed cups, or, if on hand, cleaned-out cells; the latter are the best, as they are accepted more readily. Place in the swarm-box three clean combs containing fresh pollen, new honey, but no brood, and sprinkle fresh water into one of the outside combs.

Arrange the combs so that each of the cell bars come between two combs, Fig. 49. Take the prepared box to a very strong stock, remove the lid and one outside comb to allow plenty of room to shake in the bees. Lift the combs from the strong stock one by one and shake the bees into the box (as shown at Fig. 50), taking care not to get the queen, the idea being to obtain as many young nurse bees as possible.

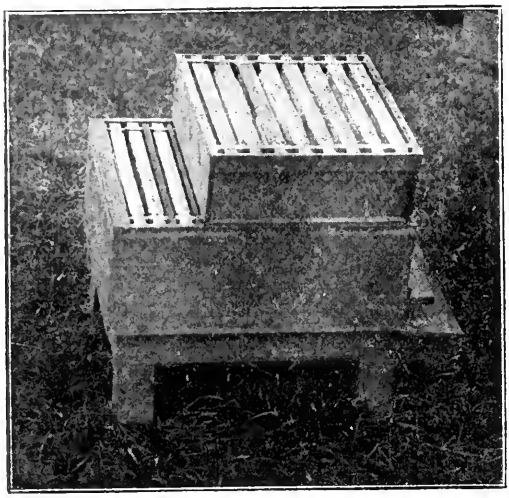


FIG. 44.

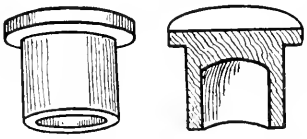


FIG. 45.

FIG. 48.

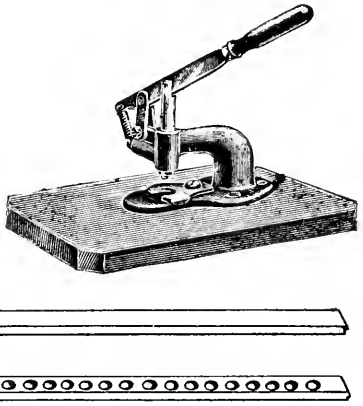


FIG. 47.

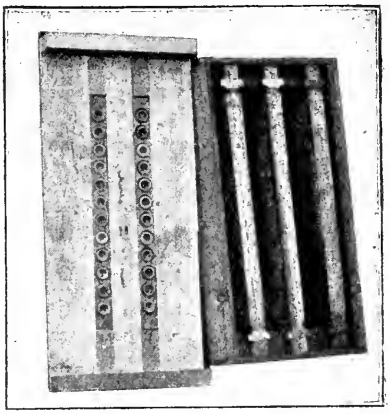


FIG. 49.

FIG. 50.

When the bees are secured take the swarm-box indoors and block it up to allow air to pass in from below through the perforated zinc. Leave it thus queenless for six hours.

(*To be continued.*)

WITH THE BEES AT THE FRONT.

By Sergt. A. G. Atwell.

(*Continued from page 50.*)

It was at the village of Zillebeke, just outside the town of Ypres, that I found the bee house to which I referred in my letter dated December 1st, 1914, and which appeared in the BRITISH BEE JOURNAL dated 10th of the same month. At that time none of us thought the war was going to last so long, and the hope I expressed that the owner would soon be able to return to his bees I am now afraid will never be realised, for I expect by now that this little apiary has quite vanished. In the same letter I wrote about my own bees, which are now all unfortunately dead through "Isle of Wight" disease. As this case may prove interesting, I will quote a few lines from the letter. I wintered six stocks in 1913. They all came through all right, but four lots showed signs of foul brood. One lot I thought best to destroy, and another I rehived on clean foundation. About this time—April—I noticed a number of dead bees outside the hives and a few crawlers. I sent a packet of dead bees to the BRITISH BEE JOURNAL office, and the verdict was "Isle of Wight" disease. However, I was determined to give the bees a chance, and so I put them all in clean disinfected hives and fed them up with sugar, using nothing in the way of medicine but Apicure, which I put in all the hives. There then came a marvellous change for the better; both complaints seemed to vanish, and I took during the season 500 lbs. of extracted and 205 sections, increasing the bees from five to fourteen vigorous stocks, which were all packed down on ten frames with a huge quantity of their own stores. The ten frames were left because I was then away at the Front. They all but one stock came through the following winter all right, and when I was home for a few days' leave in February, 1915, they seemed to be in quite a normal condition. The majority of them started the spring well, and most of them were supered up and gave some honey. But both complaints now seemed to come back again in a much stronger form, and by the end of the summer (despite the disinfecting with Izal my wife gave them) they were all dead. The disease seemed to vary with the weather, and some weeks my wife would write to say that she thought they were pulling round, and she had been able to super two or three more stocks. But a week or two later she would say how much worse they were, some of them only covering a few frames. Of course, my wife did all that was in her power to pull them round, but she was not able to put them all in clean hives, or perform other operations which I should have been able to do, and so, of course, the honey take was very small. A number of the hives still remain closed up in the orchard, and when I go home this month (having completed my military service) I hope to make a short report on them. I also intend starting again with two hives, and perhaps some bee-keeper whom the new Act affects may be in a position to supply me with them.

Returning once more to my story. We find ourselves marching back for a rest and to reorganise after our great losses, which, after all, were nothing like so bad as those of the Germans, as, of course, they did all the attacking, and were mown down by our fire as they used to advance in such hordes in their endeavour to break through to Calais. However, they never got through the thin line which at that time barred the way, and so I do not think they can have much hope of doing so now. It was at the end of November that we started our march back, passing through Dickebusch and Locre, then across the Belgian frontier into France. We passed through the town of Bailleul, and on to a little village called Outtersteine. Here we billeted at the various houses and farms, and I was fortunate enough to stay at a farm the owner of which was a bee-keeper. His farm had been damaged by a shell; all his wine, eggs, and stores had been looted by the Germans as they were retiring back through the village, being pursued by the British. However, this old bee-keeper never left his bees, and I hope to tell all about him in the next instalment of my story.

(*To be continued.*)

HARDY ANNUALS.

No doubt the reader of the above heading will think our Editors have branched out into giving us some Gardening Notes. But not so. The heading is used in the same sense as it is used in Parliament when it refers to subjects that crop up time after time. For instance, a certain ladies' paper a few weeks ago told its gentle readers that queen bees have no sting. Many readers have been told the same thing since printing was invented. A London daily lately stated that one of its readers had seen a "swarm of wasps," whatever that may mean. Numbers of readers of papers write to their respective editors about this time of year to say they have seen birds' nests containing eggs, and even young.

Soon we shall be having the crop of reports about the early cuckoo. How often I have laughed as I have read "Mr. So-

and-So, of Somewhere, distinctly heard the cuckoo a few days ago."

Of course, I don't mean to say that the reports are all false, but they are generally reported by people who can be easily deceived. I know country lads who can so nearly imitate the cuckoo that only one whose hearing for natural sounds is highly developed would not be mistaken.

But is the fact of early birds' nests or the early arrival of some migrant worth recording when it is as sure to happen as the sun to shine? It is a law of nature that birds build nests, that migrants come and go, but it is not a law of nature that they do so on a fixed date.

Take as a further example, the appearance of the butterflies. What a wonderful thing it is for some people if they see a peacock butterfly in January or February. If these people had ever studied the habits of these beautiful insects at all they would know where to find one of these any day of the winter.

There is also even among a great many bee-keepers a great lack of knowledge of wasps, one of our very worst enemies. Some years ago I visited the apiary of a large bee-keeper. While manipulating one of the hives a queen wasp flew out. I asked, "How came it there?" The answer was, "It was hatched there." There is no study in nature that will train the perceptive faculties so well as the study of insect life generally, and bees in particular. What a small percentage of people could tell the difference between drone flies, leaf-cutter bees, and hive bees.

But if a leaf-cutter bee's nest is found and the thimble-shaped cells kept to hatch out the difference is very noticeable. The rising generation have their ears and eyes trained by the study of nature, and this will lead them in after years to apprise certain natural events at their proper value and not as something that has never happened before or likely to happen again. —W. THORNE, Henstead, Suffolk.

AN APPRECIATION.

I appreciate the JOURNAL very much, especially articles on marketing of honey and general topics, discussed week by week. I have marketed over 3,000 sections since July last, and have done all between 7 and 10 p.m. at night, after business hours, which, I think, is not so bad to be only a hobby. With best wishes for the coming season.—T. H., Enniskillen.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

IMMUNE BEES AND "ISLE OF OF WIGHT" DISEASE.

[9241] Is not your correspondent, Frank Hatton (9236), February 24th, too hard and harsh on Herbert Mace (page 45) *re* his experiments? There is nothing very "righteous" in turning wrath and indignation on Mr. Mace. From the way I read his letter it does not show he exposed his hives and combs to the danger of others, or how far they are away. Even if quite near, in an expert's hands there would not be so much danger by his bees cleaning up old hives and stores as by their being left about indefinitely. "Isle of Wight" disease is so perplexing; it requires a great many experiments. The strongest stock I know is a stray swarm which took possession of a hive and stores in which a previous lot died, and they filled two supers. When you read the Board of Agriculture leaflet, and find it there stated they cannot absolutely rely on the symptoms given, it appears we shall have to keep on with our experiments.

Briefly, it seems to me we shall have to find something which will prevent the parasite from developing immediately after leaving the spore stage, and before it can establish itself in a suitable place or multiply.

It may be that there is contained in the blood of Mr. Mace's immune bees (and the blood is the life) an anti-ferment able to antagonise the pepsin of the gastric juice (*sic*).

If left undisturbed *Nosema apis* increase at an enormous rate, probably feeding upon the residue left within the colon or intestinal canal. If this residue can be propelled sufficiently rapidly along the alimentary canal, it would be expelled before the growth of germs was of any serious moment, but by being delayed the germs have time to grow in great

numbers, and in their life-cycle form quantities of irritating poisons, apt to be absorbed into the general circulation.

Working with this idea in mind, I have been trying various things, and think I have achieved some measure of success. To test it thoroughly, at the end of last August, 1915, I removed the whole of the stores from 10 hives, replacing them with stores from hives in which the bees had died of "Isle of Wight" disease, given to me in exchange for labour in disinfecting old hives. These bees were dosed with this drug and hives disinfected (I believe) with it, and were then removed five miles away on the common. I saw them on February 13th, and they were all alive, nine of them strong, eight of them with brood, so I am hoping for the best. If they can stand this all winter it must be of some value. If it should be successful, as I am hoping, it will have to be "given" to bee-keepers, or its distinctive aroma disguised in some way that will not injure its usefulness.—A. ROLLINS, Oldswinford.

DISEASE AND IMMUNE BEES.

[9242] *Re* article in BRITISH BEE JOURNAL February 10th, "Disease and Immune Bees," the method is much the same as my own, only Mr. Mace says "Stores," I say "Hives."

He states "removing *stores* in the spring." What stores? The bees would have no stores by then. Removing stores in autumn? I presume what is meant by this is to remove all honey stores and to feed up on syrup. To keep the autumn food from being contaminated it would be necessary to stop the bees from flying, otherwise they would add all sorts of stuff to it, *Nosema apis* included!

My method is this: Have a spare hive and wash it with hot water and carbolic, repaint if necessary. As soon as the bees begin to fly in the spring take all frames out of No. 1 hive and place in the clean one. Now take away No. 1 hive, wash, disinfect and repaint if required. Now take the combs out of No. 2 hive and place in No. 1, take No. 2 away to be cleaned, and so on until all are done. Repeat the process in the autumn. Now, if Mr. Mace will kindly state what stores he would remove in spring and autumn, say, for instance, how would he remove stores from combs full of brood? Further, what would the bees gain by getting clean food in a dirty hive, or what would bees gain by having a clean hive and unsuitable food? If Mr. Mace would clearly state:

How to remove stores in autumn,
How to feed for winter,
How to remove stores in spring,

then bee-keepers would say that with clean hives and proper feeding twice a year, as stated above, it would go a long way to keep our bees free from disease.

But if Mr. Mace has got a strain *immune* from disease, why all this precaution of removing stores? Anyway, I hope he has "got 'em," therefore we must "wait and see."

I will start the bid for them at 6s. per lb. (May swarm), or I will offer him two guineas for a stock delivered first week of April, 1916.—WILLIAM C. MURRAY.

WANTED, A SMALL CONTAINER FOR HONEY.

[9243] Here is a suggestion that I think, if carried out, would do more to popularise honey and increase the demand than anything has done since the advent of the one-pound section. Will some of our inventive geniuses set to work and provide us with a container, which might be made a universal standard, that will hold an amount of honey sufficient for the average requirements of one individual at a meal, probably about two ounces? The container would have to be inexpensive, strong, non-leakable, and preferably transparent. I suppose the latter would only be attainable by using glass. If made of glass it should have no shoulders, the mouth being large enough to permit of the honey being taken out clean with a spoon. It would, perhaps, be possible to have some design so that the glass container could afterwards be utilised for other useful purposes, and need not then be thrown away. Either comb or extracted honey could be placed in a receptacle of this kind, and would be very attractive. A simple label such as:

PURE HONEY,

"Nature's own sweet; aids digestion," would appeal to almost everyone. If honey was put up in this way there is no reason why it should not always be found on the tables of hotels, restaurants, railway dining-cars, passenger boats, etc., as a matter of course, where now it is seldom or never to be obtained. What a splendid advertisement this would be!—W. J. SHEPPARD, Nelson, B.C.

RESURRECTION OF THE "IMMUNE BEE."

[9244] Mr. Herbert Mace's recent letter, in which he attempts, honestly enough no doubt, to lead people to suppose that he has got what nobody else has—a strain of bees immune, or very nearly immune, to "Isle of Wight" disease—must not be allowed to pass with approving

silence. I do not dispute that the facts, as far as he knows them, are as stated by Mr. Mace, but I can assure him that his experience is not exceptional, and that, sooner or later, the bees, on which he is inclined to build such hopes, will die, as other people's have done. When I choose to do so, I can tell a tale twice as good as Mr. Mace's; but to tell it as Mr. Mace has done would simply mislead the unwary. Some people seem to think that, so far as "Isle of Wight" disease is concerned, some miracle is coming to pass for the special benefit of British bee-keepers. A miracle will not happen, and *Nosema apis* will continue to exist so long as it can find suitable hosts on which to flourish.—CHARLES H. HEAP, Reading.

TRADE CATALOGUE RECEIVED.

E. H. TAYLOR (Hive Works, Welwyn, Herts).—This catalogue is large and well illustrated. In its pages will be found a great variety of hives and appliances, at prices suited to all pockets. Along with all other firms, prices are advanced, but only moderately, when the price of materials and labour nowadays is taken into consideration. Following the bee appliance list is a short one of poultry appliances. The catalogue may be obtained free on application.

Notices to Correspondents

Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. All questions must be accompanied by the sender's name and address, not necessarily for publication, but as a guarantee of good faith. There is no fee for answering questions.

"M." (Enfield).—(1) Izal is the best. (2) They will be all right if washed out with a disinfectant.

J. ASTON (Salop).—The honey will be quite wholesome.

Suspected Disease.

NOVICE (Somerset), J. S. (Stewarton).—It is "Isle of Wight" disease.

G. J. IMRIE (Ayrshire).—The two bees sent were crushed flat; it is therefore impossible to say whether they were diseased or not. Send a few more in a small tin box if possible, or in a match box.

"FARSLEY" (Yorks).—The bees are too dry for us to be able to say with certainty the cause of death. The symptoms you describe point to "Isle of Wight" disease as the trouble.

Special Prepaid Advertisements

Two Words One Penny, minimum Sixpence. *Will advertisers please read these Rules carefully in order to save trouble, as they will in future be strictly adhered to.*

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not permissible at above rate, but will be inserted at 1d. per word as* **"Business"** *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of 3s. per ¼in., or 5s. per inch.*

PRIVATE ADVERTISEMENTS are only intended for readers having **Surplus Stock to** *dispose of.* **Driven bees, Nuclei,** *and* **Queens that are reared or imported for sale,** *are Trade Advertisements, and can only be accepted under trade terms.*

Advertisements must reach us NOT LATER than FIRST POST on the 27th of the month for insertion in the next month's RECORD.

Orders for three or more consecutive insertions in "The Bee Journal" entitle advertisers to one insertion in "The Bee-Keepers' Record" free of charge.

PRIVATE ADVERTISEMENTS.

EXPERT would undertake Spring Tour; experienced.—"EXPERT," "B.B.J." Office, 23, Bedford-street, Strand, London, W.C. v 49

EIGHT W.B.C. lifts, 1s. each; 30 feeding bottles, 3d. each; 7 doz. metal dividers, 3d. dozen.—MRS. OWEN, Risby, Bury St. Edmunds. v 48

BEES wanted, skeps, or on frames.—COOMBER, Upper Haysden, Tonbridge. v 47

CLEARANCE; new honey tins, secondhand hives and fittings.—Apply for particulars, CHAS. ROWLING, Wickhambrook, Suffolk. v 46

WANTED, English honey in bulk.—Price and sample to J. BOWDEN, 167, Ellerton-road, Tolworth, Surbiton. v 45

FOR SALE, eleven sections heather honey; 12s. lot, packed.—HOWE, Darling-street, Enniskillen.

EXPERTS wanted for North Cumberland; six weeks' tour commencing middle April; state experience and qualifications; thorough acquaintance "Isle of Wight" essential.—JOHN STEEL, 69, Broad-street, Carlisle. v 26

SEVERAL good hives with lifts, 7s. 6d. each; shallow frames and section racks, 1s. 3d. each; feeding bottles, 1s. each; a few to clear; wax extractor, full size, 8s.—H. T., "BEE JOURNAL" Office, 23, Bedford-street, W.C.

WANTED, cloth-bound copy "Bee-Keepers' Record." Vol. 7, year 1889.—HERROD-HEMPSALL, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

Just on going to press we have received word that the Rev. F. S. F. Jannings, F.E.S., of Warmsworth Rectory, Doncaster, passed away last Sunday. We are sure all those who have had the pleasure of knowing him will share our deep regret at his loss.

BRITISH BEE-KEEPERS' ASSOCIATION.

The Council of the British Bee-Keepers' Association are anxious to obtain gifts of honey for the wounded soldiers in the London Hospital, where it is urgently needed both for food and medicinal purposes. They will, therefore, be grateful for gifts of same, no matter how small, from bee-keepers throughout the British Isands. It is unnecessary to explain our obligations to these brave fellows, who have sacrified health and limbs for the sake of our country. Gifts should be sent addressed to the Secretary, B.B.K.A., 23, Bedford Street, Strand. The donors' names will be published in the "B.B.J." and RECORD.

W. HERROD-HEMPSALL,
Secretary.

HONEY FOR LONDON HOSPITAL.

Amount received ..... 228½ lbs.

A ROLL OF HONOUR.

Although bee-keeping is considered a minor pursuit, we venture to say that it has provided more fighting men than the usual average of any industry. To place on record the part the members of our craft have played in the present war we propose to make a "Roll of Honour," and shall be pleased if our readers will forward us the **Names** and **Addresses**, together with the **Regiment** and **Rank**, of any bee-keeper serving his King and Country at home or abroad; also if killed or wounded.

We print a further list of names to those sent in, and shall be pleased to have other names as soon as possible.

Major C. V. Bellamy, Leigh Holt, Clapstone, Yelverton.—R.E.

Capt. Humphreys Owen, Glansevern, Montgomeryshire.—2/7th R.W. Fusiliers.

Sergt.-Major G. Griffiths, 24, Wharfe Street, Newcastle, Staffs.—3/1st North Mid. Staffs. R.G.A.

Lce.-Cpl. John McLaggan, Glenalmond, Buchanty, Perth.—Despatch Rider, R.E.

OBITUARY NOTICE.

Mr. Oliver Knight.

I am sorry not to have seen in the JOURNAL a notice of the death of Oliver Knight, of Epney, Gloucestershire, which occurred about a month ago. He will be known to many of your readers as a very successful queen breeder. He was a simple cottager, who by sheer force of character raised himself above the limitations of the skeppist, and learnt and practised every secret of manipulation and the guiding of bees in the paths most profitable to us. His tiny garden was closely surrounded by hives, in which he wintered a great number of stocks, usually two or three in a single hive, and nearly all of them with young queens. In the spring came expansion by all the arts known to bee-dom, especially by the method of Alexander, and the sale of hundreds of stocks for which there was literally no standing-room. Oliver Knight would sell nothing, however, till after apple blossom, so that Epney was celebrated for fruit, often in years when there was very little elsewhere. Though customers had to get their bees late or not at all, they turned out so well that there were always plenty of orders waiting. It need not be said that queens were in great request a little later.

Oliver Knight's loss was much deplored at the annual meeting of his county association, where one of the nicest things said about him was that he would tell anyone all that he knew about the management of bees. He was dead when his last article signed "O.K.," dealing with queen introduction, appeared in the "B.B.J."—G. G. DESMOND, Sheepscombe, Stroud, Glos.

[This is the first intimation of the death of Mr. Knight we have had. We are extremely sorry to hear of this loss to the bee-keeping industry. Mr. Knight was a bee-keeper worthy of the name. We are obliged to Mr. Desmond for the appreciation above.—EDS.]

SOMERSET BEE-KEEPERS' ASSOCIATION.

ANNUAL MEETING.

The Annual General Meeting of this Association was held in the Municipal Hall, Taunton, on Thursday, February 24th, Mr. T. W. Cowan presiding. Owing to the severe weather the attendance was much smaller than usual, about twenty members only were able to be present.

The report for the past year was read by the honorary secretary (Mr. L. Bigg-Wither), and in it he stated that nearly 75 per cent. of the members had lost all or part of their stocks from the "Isle of Wight" disease.

This disease, which was first noticed in Somerset at Martock in 1911, had been

gradually spreading, and at the present time had found its way into almost every corner of the county. Numerous remedies had been tried for several years past, but there was no satisfactory evidence that any of the treatments really effected a permanent cure. 1915 had been an exceptionally good year for honey, and in most cases where healthy bees were present a record crop was obtained. Owing to so many bee-keepers having lost their bees the membership of the Association had been considerably reduced. The accounts, however, showed a balance in hand of £24 19s. 6d., compared with £19 2s. 9½d. the previous year.

The Report and Balance Sheet were unanimously approved and adopted.

Upon the proposal of the Chairman, seconded by Mr. L. E. Snelgrove, a cordial vote of thanks was passed to the retiring officials, special reference being made to the work of the visiting experts, much of which had been done gratuitously.

Mr. L. Bigg-Wither mentioned the great help given him by the different local honorary secretaries.

Four of the Association's experts had joined His Majesty's forces: Sergeant N. J. Reynolds, of Huntspill; Corporal R. J. Ferguson, of Bishop's Lydeard; Trooper E. Westcott, of Porlock; Private W. Gliddon, of Yatton.

Sergeant N. J. Reynolds, to the deepest regret of all who knew him, had been reported missing since the battle of Loos last September, and it was much feared that he was killed.

Mr. T. W. Cowan was unanimously re-elected President for the coming year.

Lieut.-Colonel H. F. Jolly stated how much the members appreciated the honour of having Mr. T. W. Cowan, the greatest of all British bee-keepers, as their President.

The Vice-Presidents were all re-elected, and to their number was added Mr. W. Melville Wills. Mr. R. G. Harris was re-elected Hon. Auditor, and the following were elected members of the council: Lieut.-Colonel H. F. Jolly (chairman), Miss R. Sheppard, Messrs. B. Boothroyd, J. W. Brewer, J. H. Burton, J. Charlton, J. Hutchieson, J. W. Heard, W. H. Jarvis, S. Jordan, W. J. Lang, H. Maynard F. W. Owen, N. J. Reynolds, L. E. Snelgrove, F. W. Penny, R. Litman, G. H. Tatham, and W. A. Withycombe.

Lieut.-Colonel H. F. Jolly and Mr. Eldred Walker were appointed as delegates to the British Bee-keepers' Association.

Mr. L. Bigg-Wither was re-elected Hon. Secretary and Treasurer.

The following certificates were then presented by the Chairman: The British Bee-Keepers' Association Final Expert's Certificate to Mr. J. W. Heard, of Yeovil; the Somerset Bee-Keepers' Association Certificate of Merit for Honey Judging to Mr. R. Litman, of Castle Cary.

The members then adjourned for tea. Subsequently a very interesting and instructive lecture was given by Mr. T. W. Cowan, entitled "Bee-Keeping by Our Allies." A beautiful series of lantern slides, mostly reproduced from photographs taken by Mr. Cowan himself, illustrated the many different methods practised by bee-keepers in France, Belgium, Italy, Serbia, Russia and Japan.

A very hearty vote of thanks was accorded to Mr. Cowan for his kindness in giving the lecture.

SUSSEX BEE-KEEPERS' ASSOCIATION.

The Annual General Meeting will be held on Wednesday, March 15th, 1916, at 3 p.m., in the Town Hall, Brighton, chairman the Rev. D. L. Secretan.

The committee particularly call attention to this meeting, and hope that all members will endeavour to attend. Any suggestions for the advancement of the Society will be welcomed.

A committee meeting will be held at the close of the general meeting.

EIGHTH ANNUAL REPORT.

The committee, in submitting their Annual Report, Statement of Accounts and Balance Sheet for the year ending December 31st, 1915, have to record, with sincere regret, the death of the Marquess of Abergavenny, K.G., who has been president of the Society since its inception in 1908. His Lordship, who has taken a keen interest in the Association, will be greatly missed.

The committee are pleased to be able to report that, in spite of the war and the loss of bees through the "Isle of Wight" disease, the membership of the Society continues to be well maintained.

During the year thirteen new members have been secured, making the total number, after deducting resignations, of 122 for the year.

The committee must, however, urge all members to do their best to induce other bee-keepers to become members in order that the Society may be able to continue its useful work amongst the bee-keepers of Sussex.

The committee sincerely thank all who have kindly subscribed to the Association, and hope that they may rely on their continued support.

The committee greatly regret that the Hon. Secretary, Mr. C. A. Overton, has

been obliged to tender his resignation as Secretary to the Association, having been called up for service in H.M. Forces.

It is with pleasure that the committee are able to announce that Mr. F. Kenward, of Berwyn House, Lewes, has kindly consented to undertake the duties of Hon. Secretary *pro tem.*

The thanks of the Association are due to Lieut.-Colonel H. C. Burchett, of the 1st Cadet Batt. R.F.A., for kindly letting them have the free use of a room at the Prudential Buildings for committee meetings.

The committee regret that owing to the unsettled state of the country they were unable to hold an Exhibition of Honey and Bee Produce in 1915, but they hope to do so as soon as conditions become normal.

FINANCE.

The accounts, which have been audited by Messrs. W. Hill Hunter & Co. (Hon. Auditors), of 150, North Street, Brighton, show a balance of cash and stock in hand amounting to £8 18s. 8d. This is considered by the committee to be quite satisfactory.

GLOUCESTERSHIRE BEE-KEEPERS' ASSOCIATION.

ANNUAL MEETING.

The Annual Meeting of the above Association was held in Gloucester on February 5th. There was a fair attendance of members, and Mr. G. G. Desmond was voted to the chair. The treasurer's report showed a balance of £5 9s. 3d. on the right side, which was considered satisfactory under the circumstances. The report displayed a decrease in membership, partly owing to the war, and partly owing to the spread of "Isle of Wight" disease. The determination was expressed to "carry on," in hopes of brighter days to come. Mr. W. Colchester-Wemyss, chairman of the County Council, was re-elected President, and Rev. F. H. Fowler Hon. Secretary and Treasurer. It was decided to continue the affiliation fee to B.B.K.A., and also to subscribe to the Experiment Fund organised by the Cumberland Association.

INTOXICATED BEES.

FROM AMERICA—'NUFF SAID.

"Even the little honey bee knows better what is good than the fanatical teetotaler. An American exchange is responsible for the following:—Intoxicated bees went on a rampage, the objects of their maudlin outbreak being Miss Helen Sauers, a teacher, and several pupils in the North Division Avenue school, Grand Rapids, all of whom were stung. Swarms of the bees first attacked workmen in the Grand Rapids brewery plant, and drove them from the vat-room. The insects lined around the vats in large numbers, sipping the brew. A long string of them flew to the school-room, the windows of which were open, and attacked the teacher and the pupils, all of whom have swollen faces and arms. It has been conclusively proved that the bee's fondness for certain flowers is due to the fact that they yield intoxicating beverages. And this explains the bee's eagerness and his apparent industry in going out so early in the morning. He is after his cocktail!

How doth the little boozy bee
Improve the shining hour?
By quaffing draughts of liquor from
The alcoholic flower."

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

ANGRY BEES.

[9245] I have seen the article by H. Martin in your Journal of September 16th, 1915, *re* angry bees. Your correspondent seems to have had a very lively time, and the damage done appears to have been considerable. I have kept bees now for over three years, and have only had one mishap with them in the time. This I am afraid was very much my own fault, and unfortunately cost the life of a good dog. I had been very much annoyed by some coloured thieves extracting the honey from the hives during the night, and fastened the dog to a tree to give warning. I omitted to let him loose in the morning and the bees of one hive, which are not as gentle as the others, attacked him. I got badly stung trying to get him loose, as I foolishly went without a veil. I then got veil and smoker and went round and gave each hive a good smoking. In a very little time the trouble was all over, but the dog was killed in a few minutes, having hundreds of stings in his body.

I commenced my apiary three years ago with three colonies taken from the walls of a building here. The operation was performed by the Secretary of our Association (the Western Province B.K.A.) to whose assistance I am greatly indebted. I have now twenty-three colonies. The hives (all W.B.C.) I have made myself, and all the work in connection with them I do in my spare time. I find the South African bee very easy to handle, and sometimes only use a cigarette or pipe instead of the smoker. There are, of course, differences in tempers of bees; some of mine are very easily worked with, whilst others require a good dose of smoke to make them tractable, but I have not seen any equal to those mentioned by Mr. Martin, and hope I never shall. I have not been troubled with thieves this year up to the present, and do not expect I shall be, as I am sleeping in a tent close to the hives (the nearest is 9 feet away) and have a double barrelled shot gun waiting for the maranders.

Bee-keeping in the Cape Peninsula district is a very mixed affair. Although there is quite a number who have adopted modern methods, the coloured people and a considerable number of the poorer whites still stick to cement barrels, paraffin boxes, etc., with the resultant dirty honey mixed with brood, pollen, etc. We are at present in the middle of the honey season, and whilst the season was late commencing owing to the late rains, it appears to be pretty good up to the present. Some of my hives are now carrying three supers, and on four or five I have not yet placed one; these are weak, probably owing to aged queens. As a result of the work of our Association honey is being marketed in a much better manner than formerly was the case. I can sympathise with some of your correspondents who are troubled with wasps, etc. We have a similar enemy to worry us here in South Africa. This is the bee pirate or sand wasp. There are several varieties, but the yellow and the banded pirate are the enemies of bees. The latter sits in wait for his prey on the alighting board, and any bee coming from the veldt laden with nectar is his certain captive. His victim is taken to a burrow in the ground, and the female lays an egg in the body. When the grub hatches from the egg the body of the bee provides food for it. I understand the English wasp robs the honey from the hives of the bees; it is not so with the pirate, as the bee itself is taken in this case and provides food for the coming generation of pirates. Fortunately these pests do not appear here till near the end of the honey flow, and therefore do not interfere with the work of the bees, as they would if they appeared earlier. Swallows account for a good number of bees at certain times of the year when other insect life appears to fail to satisfy their food demand.

We are fortunately free from the diseases with which you are so badly smitten in the British Isles, and we ought to be very thankful for the immunity. Bee-keeping here must be much easier than with you, as we have at the Cape no severe winter, and the bees can fly nearly all the year round. We have to be careful to see that the food supply does not fail, or the colony will be decamping to pastures new even in the middle of winter. I could give you some funny tales of the ignorance of the general South African public with reference to bees. They call the drone the "Kapater" bee (which means a sexless animal), and give him credit for supplying the colony with water. Many call the queen the "king," and imagine if you could possess yourself of the queen that the other bees would all follow you. Some of the natives eat the brood as well as the honey and appear to relish it.—GOLCAR, Cape Province, S. Africa.

NEW ZEALAND BEE-KEEPING.

[9246] Your able contributor, D. M. Macdonald, in your issue of November 4th last, quoted some facts regarding New Zealand bee-keeping which are having an important influence on that industry in this country. As they are chiefly concerned with our export honey trade some further particulars may interest your readers.

Item 1.—*Our Export Honey Trade with Britain.*—It is quite correct that our "Honey Producers' Association" has entered into a contract with the "Bristol and Dominions Producers' Association" (headquarters at Bristol, England) to send annually for three years not less than 100, nor more than 500 tons of high-grade honey to Bristol. Although we had one of the worst honey seasons ever known in New Zealand last year, we were able to export over the minimum quantity agreed upon; it is too early to estimate the probable quantity that will be available after this season.

Item 2.—*Our Honey Grading Regulations.*—These, which deal solely with honey exported from New Zealand, came into force as part of our Apiaries Act, on December 1st, 1915. They are exceedingly stringent, so that both British bee-keepers and public can rely upon all honey reaching Britain from this country being pure and the best of its class. No honey, either privately or by way of trade, is allowed to leave New Zealand until it has

been examined and graded by one of the grading officers. There are four grades ranging from "Special" to "Manufacturing," and any sample not coming up to the number of points in the grade to which it rightly belongs is thrown out. The Government grading stamp, together with number of points gained, is branded on each package, and these are not allowed to leave the grading store till they are shipped; for any attempt at tampering with such or any packages the culprit is severely dealt with.

Item 3.—*Water Content (Official) of New Zealand Honey.*—When, some three years ago, our Health Department drew up its pure food regulations it perpetuated the mistake made in other countries by allowing 26 per cent. of moisture in honey, an amount that would set up fermentation in a very short time. I at once drew the attention of the Chief Health Officer to this mistake, and pointed out that the average moisture content of New Zealand honey when placed upon the market was near 17 per cent., and suggested reducing the legal maximum water content to 20 per cent., which has been agreed upon. In order that the Department should have official data to warrant its action, fifty-one samples of honey were gathered from all parts of the country and analysed, with the result that the average water content of the whole amounted to 16.46 per cent.

Another item in this connection is worth noting. In order to furnish our bee-keepers with some simple means of ascertaining the minimum degree of density of their honey at which they could market it without fear of it deteriorating by fermentation. I tested some 250 samples put up for market in different districts with a hydrometer for their specific gravity, and eventually concluded that the minimum specific gravity should be 1.420. This minimum has now been adopted by the "New Zealand Honey Producers' Association.

I have been greatly disappointed that owing to the war I was compelled to postpone my departure for England; I had intended leaving here last March (1915), but will now wait until the war is over, when I hope to meet some British bee-keepers at their apiaries.—I. Hopkins, Auckland, New Zealand.

"ISLE OF WIGHT" DISEASE AND IMMUNE BEES.

[9247] In reply to "R. W. H." and others who have written to me direct, I may say that the bees which stood such a severe test were pure Dutch, sent me at my request by Mr. Bee Mason for the purpose of experiment.

As the last part of my article seems to have been taken seriously, it would be as well if I explained that I am not a commercial bee rearer, and that I have no interest whatever in propagating any particular kind of bee. I make no claims or prophecies in connection with these or any other bees, but simply confine myself to plain statement of ascertained facts, observing, of course, that such facts must have a significance. Surely, if some one claims that a certain article is non-inflammable and a disinterested person puts it into a fire "heated more than it is wont to be heated" and it does not burn, there is some reason for supposing the claim to have some basis in fact.

Mr. Frank Hatton, whose name I do not seem to remember, seems rather indignant with me for persevering in my attempts to find a remedy for this complaint. I quite agree with him that indiscriminate experiment of this kind might assist in the spread of disease. But I think he should remember that bees are unique in one respect. It is impossible to keep them in sound condition under complete isolation. He will find that this difficulty nullified many of the early experiments with diseased bees made under the ægis of the Board of Agriculture, confined bees dwindling and declining to raise brood. With any other class of stock it would be possible to isolate them for the purpose of experiment. But how does he imagine progress is made otherwise than by practical experiment? I am tired of reiterating the constant and incontrovertible fact that destruction of stocks has failed entirely to keep the disease in check. Only last week I learnt that in some parts of Hampshire, where the disease practically wiped out all stocks, it has broken out again among bees procured from places where "'Isle of Wight' disease was unknown."

As to the plain charge of thoughtlessness, I think it hardly needs answering. I leave it to the judgment of those who have read my humble contributions on this subject over the last three years. And where the selfishness comes in is rather more difficult to understand. Does Mr. Hatton think it was selfish to risk the loss of three stocks, when, as I have explained before, I knew how I could have saved them? If I had lost all the stocks, should I have been a victim to selfishness, when I knew a method by which they could have been safeguarded?

At any rate, it may be some comfort to him to know that I am not in the centre of a bee district. There are not, within two miles, more than three or four isolated hives, which are, have been and always will be, left to live or die, as circumstances may dictate.—Herbert Mace.

WEATHER REPORT.

WESTBOURNE, SUSSEX.

FEBRUARY, 1916.

Rainfall, 4.53in.
Above aver., 2.24in.
Heaviest fall, .72, on 10th.
Rain fell on 22 days.
Sunshine, 78.1 hrs.
Below aver., 10.2 hrs.
Brightest day, 17th, 8.5 hrs.
Sunless days, 8.
Maximum temperature, 53, on 13th and 18th.
Minimum temperature, 23, on 25th.
Minimum on grass, 20, on 9th and 25th.
Frosty nights, 9.
Mean maximum, 45.2.
Mean minimum, 34.3.
Mean temperature, 39.7.
Above aver., 0.9.
Maximum barometer, 30.415, on 1st.
Minimum barometer, 28.989, on 4th.

L. B. BIRKETT.

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AMATEUR (Linlithgow).—*Compensation for loss of bees from "Isle of Wight" disease.*—Neither the Board of Agriculture nor any other Government department give compensation for loss of bees from disease.

W. E. H. (Alfreton).—The place indicated in your sketch would be a suitable one for the hives, but a better one still would be to stand them with the backs to the evergreen hedge running from the house side towards stable, and three or four feet distant from it, with the entrances facing S.E. There would be no danger to the horse.

Suspected Disease.

E. TINDALL (S. Milford).—It is "Isle of Wight" disease.

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PRIVATE ADVERTISEMENTS.

EXCHANGE rabbits or cavies for good extractor.—ABREY, Newport Lodge, Melton Mowbray. v 52

FOR SALE, several new W.B.C. hives, 10s. each; also standard frames and shallow frames, 5s. dozen; complete British weed foundation.—Apply, S. COCKS, Napton, Rugby. v 55

WANTED, honey extractor; price and particulars.—Reply to WILLIAMS, Hairdresser, Ravenhill, Swansea. v 53

FOR SALE, cheap, ten secondhand hives, complete, 10s. each; twenty-four honey tins, 8d.; rapid feeders, 1s. each; two gross ends, 4s.—OWEN, Liberal Club, Cheltenham. v 54

FOR SALE, 23lbs. of pure beeswax, 1s. 3d. lb., cash with order.—KNIGHT, Kenwyn Apiary, Truro. v 51

FOR SALE, twenty-two W.B.C. hives, new in 1913, in excellent condition, having had two coats of paint each year, 8s. each.—J. STRATTON, St. Andrews, Warminster, Wilts. v 50

EXPERT would undertake Spring Tour; experienced.—"EXPERT," "B.B.J." Office, 23, Bedford-street, Strand, London, W.C. v 49

BEES wanted, skeps, or on frames.—COOMBER, Upper Haysden, Tonbridge. v 47

WANTED, English honey in bulk.—Price and sample to J. BOWDEN, 167, Ellerton-road, Tolworth, Surbiton. v 45

SEVERAL carpenter-built zinc roof hives, telescopic cover, 7s. 6d. each; extractor, geared, 15s.; honey pail, 3s.; three dozen section racks, 1s. 3d. each; two dozen bottle feeders, 1s. each.—H. M., "BEE JOURNAL" Office, 23, Bedford Street.

WANTED, cloth-bound copy "Bee-Keepers' Record." Vol. 7, year 1889.—HERROD-HEMPSALL, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED, good lantern slides on poultry-keeping.—Price and particulars to CHANTICLEER, "B.B.J." Office, 23, Bedford-street, Strand, London, W.C.

FOR SALE, ¼ plate Koilos camera, with Goerz Dopp anastigmat f/125 lens, can be used either for hand or stand work, twelve single dark slides and film pack carrier. The whole packs in stout block leather sling case, 9in. long, 6in. deep, and 2½in. wide; also light brass telescopic tripod, in leather sling case, all in excellent condition, and used by me to take the illustrations in "Helpful Hints" and "Continental Wanderings." The outfit for sale in one lot for £6; reason for selling have bought a Reflex. A splendid opportunity for anyone wanting a good reliable camera. Will send on approval; Deposit.—HERROD, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

BUSINESS ADVERTISEMENTS.

TO BE SOLD BY AUCTION, on THURSDAY, March 16th, 1916 (or by private treaty), at NORBURY HOUSE FARM, near Newport, Salop, five stocks of bees in W.B.C. hives, certified free from disease by county expert.—POOLER, DAVIES & WHITE, Auctioneers, Newport, Salop.

BRITISH BEE-KEEPERS' ASSOCIATION.

The Council of the British Bee-Keepers' Association are anxious to obtain gifts of honey for the wounded soldiers in the London Hospital, where it is urgently needed both for food and medicinal purposes. They will, therefore, be grateful for gifts of same, no matter how small, from bee-keepers throughout the British Islands. It is unnecessary to explain our obligations to these brave fellows, who have saerified health and limbs for the sake of our country. Gifts should be sent addressed to the Secretary, B.B.K.A., 23, Bedford Street, Strand. The donors' names will be published in the "B.B.J." and RECORD.

W. HERROD-HEMPSALL,
Secretary.

HONEY FOR LONDON HOSPITAL.

Amount received ..... 228½ lbs.

A ROLL OF HONOUR.

Although bee-keeping is considered a minor pursuit, we venture to say that it has provided more fighting men than the usual average of any industry. To place on record the part the members of our craft have played in the present war we propose to make a "Roll of Honour," and shall be pleased if our readers will forward us the Names and Addresses, together with the Regiment and Rank, of any bee-keeper serving his King and Country at home or abroad; also if killed or wounded.

We print a further list of names to those sent in, and shall be pleased to have other names as soon as possible.

Major Thos. Hercy Denman, Retford.—3rd Supernumerary Co., 2/8 Notts and Derbys.

Dr. Thos. S. Elliot, Southwell.—Surgeon, 2/8 Notts and Derbys.

Captain G. H. Black, Gunthorpe.—7th Battn. Sherwood Foresters.

Captain F. M. Donne, Nottingham.—2/5th Sherwood Foresters.

Captain and Brigade Chaplain Rev. Wallis Sidney Hildesley, Colwick.—South Notts Hussars.

Captain and Brigade Chaplain Rev. Ed. John Powell, Cinder Hill.—3rd Mounted Brigade, Notts and Derbys.

Captain Bernard Jessop, Kimberley.—8th Yorks A.P.W.O.

Lieut. Norwood N. Howard, Sherwood.—1/5th Sherwood Foresters.

Sergt. W. H. Mellors, Norton Cuckney.—Notts Sherwood Rangers.

Lance.-Cpl. Tom Walter Fletcher, Kimberley.—"A" Co., 1st K.R.R.C.

Trooper Cyril Fredk. Riley, Normanton-on-the-Wolds.—South Notts Hussars.

Private Frank Fletcher Fidler, Hucknall.—10th Lincolns.

All the above are members of the Notts B.K.A.

LINCS. BEE-KEEPERS' ASSOCIATION.

The annual meeting of the above Association will be held in the Guildhall, Lincoln, on Saturday, the 25th March, to commence at 3 o'clock in the afternoon.

SOUTH STAFFORDSHIRE AND DISTRICT BEE-KEEPERS' ASSOCIATION.

ANNUAL MEETING.

The annual meeting of the above Association was held in the Temperance Institute, Dudley, on Saturday, February 12th, 1916.

Among those present were Messrs. J. Price, A. Cheshire, G. F. Stubbs, J. Cole, L. Homer, W. Dews, T. Tittenoor, T. Taylor, W. Egginton, A. E. Taylor, F. White, A. Rollins, W. Hildreth, Mrs. and Miss Richards, and W. Herrod-Hempsall, F.E.S., Secretary and Lecturer to the British Bee-Keepers' Association.

Mr. Herrod-Hempsall was voted to the chair, and the following officers were elected: President, Viscount Cobham: Vice-Presidents, the Hon. J. C. Lyttelton, M.P., Sir A. Boscawen, M.P., Sir Gilbert Claughton, Dr. Messeter, General Hickman, M.P., Major Green, Ed. Davis, Esq: Committee, Messrs. Thompson, Cheshire, Stubbs, Hopkins, T. Taylor, A. E. Taylor, J. Cole, Lester, H. Sherwood, W. Hildreth, A. Onions, A. Parker, W. Haycock, W. Dews, and W. Egginton: Hon. Secretary, Mr. Joseph Price: Assistant Secretary, A. Cheshire: Treasurer, C. C. Thompson: Experts, Messrs. Price and Rollins; Representative to B.B.K.A., Mr. R. Talbot Clayton.

The Secretary reported that the Association was in a very good position. The subscriptions were in excess of last year, and 23 new members had been enrolled. Their finances had now reached the sum of

£19 3s. 6d., with a balance in hand of £1 1s. 10d. They had extended their boundaries, and with the help of local secretaries, recently appointed, he hoped they would still continue to develop.

The chairman remarked that he was pleased to hear that the Association was progressing, and hoped their boundaries would soon cover a great district.

The inspection of members' apiaries for 1915 had been carried out as usual by the Association's experts, Messrs. Price and Rollins. Their reports show that they jointly visited over 100 apiaries, containing upwards of 500 stocks of bees. The result of their examinations showed that the old disease, foul brood, was practically non-existent, but the newer scourge of bee-keepers, namely "Isle of Wight" disease, was making sad havoc of members' stocks, some bee-keepers having lost their stocks for the second time.

The beginning of the summer gave great promise of another record season, but the low temperature of July stopped the honey flow, so that only those bee-keepers whose stocks were in good form early on were able to secure surplus. Some members, however, were able to secure as much as 100 lbs. from one stock, which is quite good and shows the capabilities of the bee-keepers.

These reports were considered very satisfactory, and adopted.

In proposing a vote of thanks to the chairman, the Secretary said he was sure all present were delighted to see Mr. Herrod-Hempsall with them once more, this being his fourth visit, and he assured him that there would always be a warm welcome for him in South Staffordshire.

In responding Mr. Herrod-Hempsall said he was always pleased to help the members, epecially when he saw them trying to do their best.

An excellent tea was then partaken of in the Temperance Café.

After tea a lantern lecture on the "Pleasure and Profit of Bee-Keeping" was given by Mr. Herrod-Hempsall, and it proved to be a most interesting and instructive one. Mr. Lester, occupying the chair, said he was quite sure everyone had listened with delight to the excellent address, and Mr. J. Cole, in seconding a vote of thanks, declared it to be the last word on bee-keeping. Before the lecture he felt that the subject chosen was not an appropriate one at the present time, but the lecturer had made him alter his mind very quickly. He was now delighted with it.

At the invitation of the committee members had been asked to bring presents of honey for the wounded soldiers, and over 28 lbs. was handed over for this purpose to the Dudley Hospital committee.

At a subsequent meeting of the committee it was unanimously decided to accede to the request of the Cumberland and Westmoreland Bee-Keepers' Association for funds to test the experiment on "Isle of Wight" disease, a vote of £1 being given, and the Hon. Secretary, Mr. J. Price, was elected as their representative to the committee appointed to supervise the carrying out of the test.—A. CHESHIRE, *Assistant Secretary.*

NOTTS. BEE-KEEPERS' ASSOCIATION.

ANNUAL MEETING.

The annual meeting of the Notts. Bee-Keepers' Association was held on Mar. 4th, at the People's Hall, Heathcoat Street, Nottingham, the Mayor (Mr. J. G. Small) presiding over a large attendance.

Amongst those supporting the Mayor were Messrs. G. E. Skelhorne, Sneinton; Wm. S. Ellis, Sherwood; A. G. Pugh, Beeston; F. G. Vessey, Newark; R. W. Dorrington, Eastwood; A. Riley, Beeston; M. H. Fox, Kirkby; G. Smithurst, Watnall; T. N. Harrison, Nottingham; W. Adams, Mansfield; H. M. Riley, chairman of the Leicestershire Bee-Keepers' Association, and others, including a good number of ladies.

The annual report, read by the Secretary, showed that there were now 247 members, a slight reduction; but nevertheless a gratifying number when the present circumstances are taken into consideration.

With the aid of the usual grant from the County Council (£25) the Association had been able to give expert instruction all over the county, and eleven experts had visited over 200 apiaries and inspected 807 stocks. Fourteen per cent. of bees examined were found to be suffering from disease, which was the highest Mr. Hayes had known during his connection with the Association. During the year shows were held at Newark and Beeston, and also at the Royal Show. The "Isle of Wight" disease had made great inroads during the season, and they feared that by now many stocks would be found to have succumbed to the disease. Unfortunately as yet they had been unable to give any cure, no remedies having been found to be reliable.

THE VALUE OF BEES.

Referring to the value of bees, Mr. Hayes stated that without bees certain fruit trees would bear no fruit at all. There was, he believed, a great future for bee-keeping.

It was reported that Mr. A. Riley (Beeston) had gained the final diploma, and Mr. E. Hollingsworth (Heanor) the intermediate diploma.

The financial statement revealed an increased balance in hand of £16 16s. 6d.

The report and accounts were adopted, and certain alterations in rules were sanctioned.

The Duchess of Portland was again elected President, and Mr. Hayes, after twenty years' service, was re-elected Secretary and Treasurer. A list of members at the Front was read, and it was decided that they be retained as members though their subscriptions might not be paid.

BOARD OF AGRICULTURE'S IGNORANCE.

Replying to a vote of thanks, the Mayor said the ignorance of the value of the bee to the community seemed to have spread to the Board of Agriculture, for had they done what they should at the proper time the bees of the country would have been saved in a far greater measure from the ravages of disease, though it might have occasioned hardship to some bee-keepers.

Following the meeting tea was provided, competitions arranged, and an enjoyable conversation held.

One of the most notable features of the meeting was the exhibit of honey of various colours and grades from Great Britain, France, Canada, America, Australia, New Zealand, Hungary, India, California, Hawaii, and Jamaica, comprising no fewer than 80 different samples. Flowers were also shown from which the honey was chiefly obtained.

Mr. Doleman gave a paper on "Are we to return to old-style Bee-Keeping?"

The winners in the single-bottle classes for honey were:—Granulated.—1st, Mr. J. T. Duckmanton, Langwith; 2nd, Mr. J. North, Sutton. Liquid:—1st, Mr. J. T. Duckmanton, Langwith: 2nd Mr. A. G. Pugh, Beeston.

There were also the usual drawings for members at tea, and for all who had paid their subscription for 1916.

The meeting went so well that the evening appeared to be far too short.—*Communicated.*

BEE-KEEPING IN NEW ZEALAND.

Since I have contributed one or two articles on the above I have had a number of enquiries from bee-keepers in England asking information as to the possibilities of the industry out here; therefore I think if I gave a small article on the subject it would save enquirers writing, also my time in replying, and would, perhaps, be of interest to the English bee-keepers.

New Zealand, being blest with an equable climate, is eminently suitable for bee-keeping, as the summers are long and winters short, with a great deal of sunshine. There is in most parts a considerable amount of natural flora that secretes honey, and where settlement has been carried out for a number of years there are the pastures of English grasses with an abundance of white clover.

A newcomer to the country can practically choose what climate he will live in, whether cold, temperate, warm, or semi-tropical. The fact that New Zealand is a long and narrow country extending from about 48—34 deg. south to north enables one to get all sorts of climates. The west coasts of both islands are more unsettled than the east, having considerably more rain and wind, but, on the other hand, the east coast has rather more dry weather than is desirable, the pastures drying right up some seasons, which doesn't mean successful bee-keeping.

The North Island, as a rule, has more rain than the south, but in both there is room for hundreds of bee-keepers to make a very comfortable living.

I should like to impress upon readers that New Zealand is for the most part a settled country, and it is not necessary to come out here with the idea of carving one's home out of the solid bush and starting one's life afresh. There certainly is plenty of cheap land with bush on it, but that for the most part would be unsuitable for bee-keeping, not counting the difficulties of access in the shape of roads, etc.

There are hundreds of small townships in the country where rents are cheap, and the districts suitable for bee-keeping, and my advice to anyone contemplating coming out to the Dominion is to count upon coming to a very similar place to many countrysides of England, with just a few difficulties that one easily recognises and in a short time surmounts.

In the North Island there are the following bee-keepers' associations:—Waikato Bee-keepers' Association: Secretary, Mr. W. Hooper Teed, Waihou, Thames Valley; S. Taranaki Bee-keepers' Association: Secretary, Mr. H. Warcup, South Road, Hawera; Pahiatua Bee-keepers' Association: Secretary, Mr. G. Bentley, Pahiatua, Wairarapa. South Island:—Canterbury Bee-keepers' Association: Secretary, Miss Mackay, Middle Lincoln Road, Spreydon, Christchurch; South Canterbury Bee-keepers' Association: Secretary, Mr. R. Lang, Geraldine; Southland Bee-keepers' Association: Secretary, Mr. L. Gardiner, 119, Elles Road, Invercargill.

I would suggest to the intending colonist to write each of these about a week before sailing, asking the secretary

to reply to him on the boat at the port of his destination, and from these get the information he desires. Having got that, call at the Dept. of Agriculture, Horticulture Division, asking for the Director, Mr. T. W. Kirk, from whom he will get every assistance possible and valuable advice, and the bee-keeper then can decide in which district he intends to settle. Personally, I believe that unless a man deliberately went against advice, it is practicable to make a comfortable living in any part of either island.

We have one of the best Apiaries Acts in the world, which is enforced, and in it inspectors are empowered to burn box-hives on the spot, and prosecute owners not treating foul brood within reasonable time after being served with a notice to do so.

We have also a co-operative association that will take the whole of the produce, and either export it or place on the local market to the best possible advantage; therefore the bee-keeper need not worry about finding markets.

The season now started promises well, and seeing we have secured such an excellent market in England, where our honey is being sold for the first time as New Zealand produce, we are anxious to raise a big crop to meet the demand. Our association exported 108 tons last year, besides supplying nearly the whole of the local demands.—FRED C. BAINES, Normanby, Taranaki, New Zealand.

DOUBLE NUCLEI AND HOW THEY ARE WORKED.

I enclose a picture of a simple hive I have designed to accommodate two separate nuclei under one roof. The photo makes the construction plain. Two separate boxes each holding five frames and a dummy stand side by side, and are covered by the lift and roof of an ordinary ten-frame hive. The quilt is in two portions, and each is tacked on one side to the brood-chamber, in order to prevent the bees mixing together whilst the frames are being examined. A hole is provided in each quilt for feeding purposes.

The boxes may be carried about and filled from any hive in the apiary; there is no danger of two lots uniting and killing one of the queens, as frequently happened previously; they are compact and can be very quickly examined and fed.

MR. BOWEN'S NUCLEUS HIVES AS USED IN THE COTSWOLDS.

Each hive is stocked at midday by dividing a strong six or seven frame colony, putting the smallest half with queen into one box, and the larger portion without queen into the other.

The entrances are tightly stuffed with grass, and the quilts drawn closely over so that no bees may fly out.

In the evening either a virgin or a ripe cell is given to the queenless half, and twenty-four hours' after both lots are liberated by withdrawing the grass from the entrances.

In about a week the portion with the

queen will have grown quite strong, and can then be de-queened, giving a virgin or a queen-cell as before.

As soon as both queens have commenced to lay steadily, a frame or two of foundation is added to catch any new honey that may be collected if a flow is on.

Such nuclei when established will give two fertile queens each per month for three successive months when cells are employed, or three per month if virgins are introduced; but only if they are attended to in the right way and at proper intervals throughout the season.

In the late autumn two nuclei can be united into one strong, profitable colony the day after the poorest queen has been removed.—A. H. Bowen, Cheltenham.

QUEEN-REARING AND INTRODUCTION.

(*Continued from page* 70.)

At four o'clock in the afternoon return to the confined bees and transfer a larva into each cup by lifting them out one at a time, replacing the one removed for the time being with an empty cup to prevent the escape of the bees, until all are completed, then wrap down warmly with blankets, and leave in the dark until the following morning. During the night the bees will work upon the cups and feed the larvæ.

No. 1.

No. 2.

No. 3.

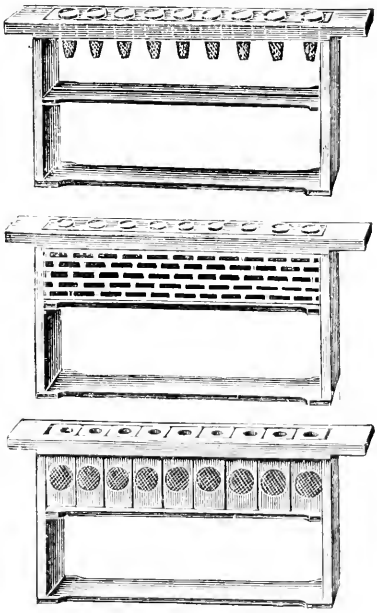


Fig. 51.

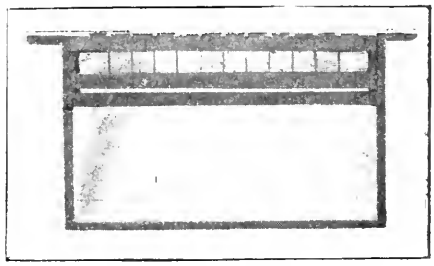


Fig. 53.

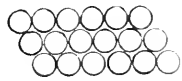


Fig. 55.

Fig. 56.

About six o'clock the same evening go to a strong stock and cage its queen. This may be the one from which the bees were taken, or any other in the apiary. Remove one outside comb and spread the central brood so as to admit from one to two bar holders, No. 1, Fig. 51, into which the started cells in their bar are dropped, Fig. 52, or they can be placed in a strong stock in a holder covered with queen excluder, No. 2, Fig. 51. When sealed over the cells are placed in nursery cages in

the holder, No. 3 same illustration, or put into one having wire cloth on each side, and the compartments divided by tin slips, as Fig. 53, and placed in a strong stock to hatch out. These holders can also be used in a super, a plan which is followed by that noted Italian queen breeder, Signor Piana, Castel San Pietro, Bologna, who is seen on the left at Fig. 54, proudly showing a beautiful batch of queen cells to the author during his visit to Italy in 1913.

A yet later method practised by Mr. Pratt was to get the queen to deposit eggs in the artificial cells so that the risk and labour involved in transferring larvæ are obviated. This is done as follows: A large quantity, *i.e.*, about six hundred shells, are filled with wax and compressed with a slightly smaller die in the Grace Cell Compressor. After the small particles of wax clinging round the edges have been removed, they are set into a small frame, much as a printer sets type.

The frame is laid flat upon a soft surface, such as a piece of felt. One at a time the cups are placed in position in rows, wax side downwards.

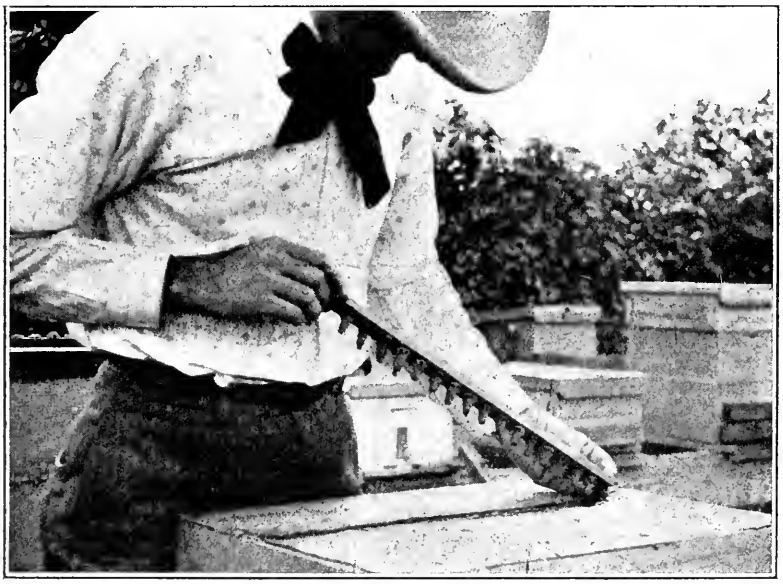


Fig. 52.

When placing the cups into the frame begin at the bottom and work upwards, holding the forefinger of the left hand gently against each row of cups to steady them.

Let each row of cups lock into the row directly below, as shown in sketch, Fig. 55.

Directly the first layer of cups is in place force pieces of thin wood between the last row of cups and the top bar of the frame and also at one end to hold the cups in place. Now place the upper layer of cups directly on top of the first layer, in the manner already explained, except that these cups are set wax upwards instead of downwards.

The upper layer of cups should break joints with the lower layer, as Fig. 56.

When both sets of cups are in position in the frame securely lock the lot by forcing thin strips of wood between the cups and the frame at the top and one end, when it will be found that the frame can be lifted, and is like a small drawn comb.

The frame must be of stout material and well nailed to withstand the pressure put upon it.

This arrangement gives the bees and queen the impression that it is real comb:.

the workers will polish the cells and the queen will lay in them exactly as if they were natural cells.

It is well to place this frame of cups into a nucleus for a short time in order that the cups may be worked upon and attached to one another before placing them with the breeding queen.

When the eggs have been deposited and the larvæ hatched, each cell can be removed separately ; in fact, we can term it " a separable brood comb."

(To be continued.)

Fig. 54.

EXPERIENCES WITH " ISLE OF WIGHT " DISEASE.

By J. Price.

(Continued from page 36.)

In the last notes I wrote, I mentioned the interesting fact that at the British Bee-keepers' Association's Apiary at Swanley the bees were still free from any signs of disease after re-stocking a few seasons ago.

This is certainly very welcome news and shows what is possible in combating disease when in the hands of a good expert; but I am afraid that ordinary bee-keepers will assume that, although this is possible with experts, there is no chance of success for ordinary individuals.

Let us all take hope from this example, and try our best to do likewise, even if we are not all experts. Our Junior Editor gives his views and instructions very clearly in the pages of the Bee Journal week by week, so that no one need fear to make a fresh start even if success does not come at the first trial.

There is no doubt but that the bee-keepers of the future will be of a different class to the majority of those that possessed bees previous to the introduction of " Isle of Wight " disease, and the fight against disease will continue for many years to come.

The ravages of foul brood twenty years ago was the dread of every good bee-keeper, and while in many places it was

next to impossible to keep bees healthy for any length of time, still, in time, by perseverance in treatment and application of known remedies success was attained, so that just before the advent of the present scourge, foul brood caused no alarm to capable bee-keepers.

Still, I fancy some would say, "Isle of Wight" disease is different. We have no remedy, and every bee-keeper is not conversant with the difficulties that present themselves in dealing with this pest. Quite so, but I am convinced that if bee-keepers will throw overboard certain notions and fancies that have gained ground of late, which I have alluded to in previous articles, and follow instructions as given in the pages of the JOURNAL by our esteemed Editor there is a fair prospect of success.

HONEY IMPORTS.

The value of honey imported into the United Kingdom during the month of February, 1916, was £5,055, from a return furnished to the BRITISH BEE JOURNAL by the Statistical Office H.M. Customs.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

"ISLE OF WIGHT" DISEASE.

PREVENTION IS BETTER THAN CURE.

[9248] With reference to Mr. Desmond's letter in your issue of 17th February. If we could imagine an attack of "Isle of Wight" disease in prehistoric days, when most of Britain was merely forest, the disease would, I think, have had a very precarious existence. It is the modern intensive bee-keeping that gives the disease such dramatic power of destruction. We have evidence that it is not a new disease in England, but in the past and up to the introduction of sending bees by rail and post, and the widespread increase of bee-keeping by the work of the bee associations, the disease was not able to spread rapidly, and after ravaging a district would possibly not trouble that district again until a long time after. It is a fair assumption that in old style bee-keeping, when the bees were all dead in a district, the old combs would be promptly cut out either for their honey or wax value, which would give a successful condition for a restart, and also there would be strong probability that new skeps would be used in place of the old ones scrapped by weather and mice. I have had some experience of restarting in districts cleared out by "Isle of Wight" disease, and I am convinced that the chief cause of a fresh outbreak is the practice of leaving the old hives with their combs on their stands scattered all over the district and acting as decoys to bees for the further propagation of the dreaded disease. It is undoubtedly true that the disease could be stamped out by the Government applying drastic means such as they apply in the case of the foot-and-mouth disease of cattle. Until the Government take this necessary action we must carry on as intelligently as we can, as it is impossible to leave the disease and the bees to nature without man's interference.

As regards Mr. Desmond's theory that a development of the swarming impulse is nature's plan of meeting the danger, I do not agree. It is evident that when the disease enters a district the bees in that district, swarming or no swarming, are doomed to extinction. It is man's interference alone can save them, and only by drastic measures of stamping out. If hives are permitted to be robbed the district is quickly cleared of bees, but where intelligent methods are practised, as in the case of the Cumberland and Westmorland Association, the disease is held in check and bee-keeping is carried on in comparative safety. I would here remark, however, that the old plan of placing hives in rows should be abandoned, and instead the hives should be scattered as much as possible and facing different ways as a protection from the danger of crawling and drifting bees.

Reverting to the question of swarming, I venture to say that artificial swarming before the bees develop the swarming impulse would give greater security to the bees from "Isle of Wight" disease. I have already drawn attention in a previous letter to the probability of scout bees bringing disease from the scattered "decoy" hives, and Mr. Desmond's mention of swarming reminded me of this view. Will bee-keepers during the next season watch the actions of the scout bees? My experience of natural swarms from a hive that shows disease is that they are all tainted, and all alike die. When we have restarted bee-keeping it is a subject of much speculation

as to how the disease keeps cropping up again, generally in the best hives that look most like swarming. One of my hives swarmed twice. The first swarm was the first to show the disease. It and the stock and second swarm were destroyed by me before Christmas had come. If the scout bees fix upon an empty hive, probably diseased, and no doubt after closely examining the interior of other empty hives (what a choice of "nice" homes they have offering now), when the swarm settles preparatory to absconding to an empty hive, the bee-keeper who is on the spot, if he knew the truth about the scout bees, would not hive them in a clean hive with his usual confidence. If there is anything in this "scout bee" idea let us have reports of observers. How much of robbing is due to the initiative and marvellous pertinacity of scout bees? Many bee-keepers close up the entrances of hives after the "Isle of Wight" disease has destroyed the bees, but the scout bees have a way of finding entrance, often by the roof. I say that by artificial swarming and ruthlessly "stamping out" disease we can carry on in disease-stricken areas, but I think that permitting natural swarming is playing the game of *Nosema apis*, which, I believe, exploits the swarming impulse much in the same way as the spider and the fly, but, alas, with more fatal result. Therefore, I plump for artificial swarming.

As soon as the war is over I hope there will be a ramping and raging campaign for Government help to fight the disease.—J. N. KIDD, Stocksfield, Northumberland.

DEALING WITH BEE DISEASES.

[9249] Last March I decided to interest myself in bee-keeping, purchasing a stock of hybrids. I contracted a very severe attack of "bee fever." I then secured a copy of the "British Bee-Keepers' Guide Book," and got on swimmingly. An expert visited me and pronounced my stock healthy. I then bought a swarm of black bees, which also prospered. Then I learnt that one who had kept bees for many years had been "wiped out" by *Microsporidiosis*. Apparently he left his hives untouched, for they are still in the same condition as when occupied.

Soon after at a public auction sale, several bee-hives (containing combs), which, I am given to understand, belonged to one who had lost his bees by "foul brood," were sold. Since then nearly all the bees in the district have been or are affected by either "Isle of Wight" disease or foul brood. Can it be wondered at?

I was invited to join the "County Bee-keepers' Association," but before doing so I ask, of what benefit will it be to me? Or again, not taking such a selfish view, of what benefit would it be to others?

Now, sir, I read in my BRITISH BEE JOURNAL that the Board of Agriculture are experimenting with a view to the discovery of means to combat the scourge which is devastating the apiaries throughout the country. Would it not be advisable to remind the proper authorities that "prevention is better than cure"?

With "Foot and Mouth" disease what happens? Isolation and destruction ordered immediately. "Swine fever," again destruction, and part compensation. Other diseases of animals are dealt with accordingly. Why on earth do they not give power to the various bee-keepers' associations to act, and demand the immediate destruction of all hives affected? Then, and not till then, shall we see our country self-supporting, so far as its honey consumption is concerned.—ALFRED MESURE, Wooler, Northumberland.

Queries reaching this office not later than FIRST POST on MONDAY MORNING will, if possible, be answered in the "Journal" the following Thursday. Those arriving later will be held over until the following week. Only SPECIALLY URGENT queries will be replied to by post if a STAMPED addressed envelope is enclosed. All queries must be accompanied by the name and address of the sender, not necessarily for publication, but as a guarantee of good faith. Correspondents are requested to write on one side of the paper only.

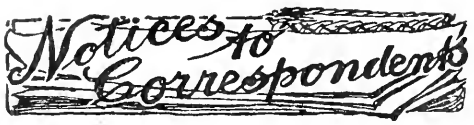
MAKING BOOT POLISH.

[9043] Being a regular contributor of your valuable paper, the BEE JOURNAL, I should esteem it a favour if you could let me have a recipe of black and brown boot polish at your earliest convenience through the journal and oblige.—CUSHAG, Isle of Man.

REPLY.—The following is given in A.B.C. and X.Y.Z.—"*Polish for Kid Shoes.*—Beeswax softened by neatsfoot oil. The composition is made by mixing the oil with the melted wax so as to be when cold about like butter, soft enough to 'spread.' A small portion of lampblack is also mixed in while the mass is melted. If there is any ordinary shoe polish on the shoes it should be washed off, and the shoes allowed to dry. An old tooth-brush can be used to

apply a thin even coat, which is then polished with a soft woollen rag see-sawed across the surface." This would probably answer for brown boots if the lampblack was omitted.

A recipe from "Bee Produce" for floor polish will also answer for leather. "Clarified beeswax 6 ounces, rectified turpentine 12 ounces. Melt in water bath, just dissolving the wax, then add the turpentine and stir." For black polish add lampblack.



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NOVICE (Yorks).—(1) *Using Rymer honey board.*—It will to a certain extent act as a queen excluder, especially under sections. (2) *Treacle "foot" as bee food.*—Do not use this for bee food, it is not at all suitable for the purpose. (3, 4, and 5).—The answer to No. 2 will also dispose of these queries. (6 and 7).—If you do as suggested, work them on eight combs. If you are working for increase we should advise you to read the article on "Queen Rearing and Introduction" in the "B.B.J." for July 1st, 1915. (8).—We presume this refers to early spring. If honey is coming in so freely that there is danger of the brood combs becoming clogged with it, so that the space available for brood rearing is limited, put on a super. You may use a small one as suggested.

NOVICE (Tonbridge).—The presence of queen cells will not make any difference to the bees. They will keep on working unless the hive becomes overcrowded.

F. H. PEARSE (Wisbech).—If there are only a few cells use the combs in the supers as they are, the bees will clean them up all right. If there is any quantity of honey, extract as much as possible, and you may wash the combs by syringing them freely with luke-warm water, then shake the water out and allow them to dry.

MISS L. WELCH (Essex).—The secretary of the Essex B.K.A. is Mr. G. R. Alder, 7, Bulwer Road, Leytonstone. The Associations do not supply appliances: send to our advertisers for catalogues.

C. R. J. (Dorset).—(1) If you only heat the candy until it will just run the texture will not be affected. Your purpose would be served by only warming it until it was just a soft paste. (2) If you refer to our advertisement of sugars you will find several varieties "starred" as being suitable for bee food, either syrup or candy.

Suspected Disease.

A. TUNGE (Beds.).—The bees are suffering from "Isle of Wight" disease.

A. J. P. (Exeter).—The bees were too dry for diagnosis. The symptoms you describe point to "Isle of Wight" disease. Better destroy the combs.

G. J. I. (Failford).—Judging from the further particulars you send, there is no doubt that the trouble was "Isle of Wight" disease. You took the right course.

Special Prepaid Advertisements

Two Words One Penny, minimum Sixpence.
Will aavertisers please read these Rules carefully in order to save trouble, as they will in future be strictly adhered to.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not permissible at above rate, but will be inserted at 1d. per word as* **"Business"** *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of 5s. per ¼in., or 5s. per inch.*

PRIVATE ADVERTISEMENTS are only intended for readers having **Surplus Stock to** *dispose of.* **Driven bees, Nuclei,** *and* **Queens that are reared or imported for sale,** *are Trade Advertisements, and can only be accepted under trade terms.*

Advertisements must reach us NOT LATER than FIRST POST on TUESDAY MORNING for insertion in the "Journal" the same week.

Orders for three or more consecutive insertions in "The Bee Journal" entitle advertisers to one insertion in "The Bee-Keepers' Record" free of charge.

PRIVATE ADVERTISEMENTS.

WANTED, observation hive, cheap, for school, guaranteed free all disease.—JACKSON, Godolphin School, Hammersmith. v 63

WANTED, some heather sections.—Price and quantity to SYDNEY WHATFORD CO., St. Ann's Café, Manchester. v 62

EUPHONIUM, music and instruction book, instrument slightly dented, £2 15s.; exchange bees, honey.—WARD, Melbourne, Halesowen. v 61

DAY old chicks, White Leghorns, Cam-Barrons strains, 7s. 6d. doz.; eggs, 3s. 6d., from hardy stock; live delivery.—BEN CASTLOW, 72, Nicholson-street, Portrack-lane, Stockton-on-Tees. v 60

OWNER enlisted.—Will someone with thorough knowledge of work take charge of twenty stock apiary on fruit farm in Worcestershire; salary by arrangement.—BOX S., "BRITISH BEE JOURNAL" Office 23, Bedford-street, Strand, W.C. v 57

BRITISH BEE-KEEPERS' ASSOCIATION.

The Council of the British Bee-Keepers' Association are anxious to obtain gifts of honey for the wounded soldiers in the London Hospital, where it is urgently needed both for food and medicinal purposes. They will, therefore, be grateful for gifts of same, no matter how small, from bee-keepers throughout the British Islands. It is unnecessary to explain our obligations to these brave fellows, who have sacrified health and limbs for the sake of our country. Gifts should be sent addressed to the Secretary, B.B.K.A., 23, Bedford Street, Strand. The donors' names will be published in the "B.B.J." and RECORD.

W. HERROD-HEMPSALL,
Secretary.

HONEY FOR LONDON HOSPITAL.

Amount received ..... 228½ lbs.

A ROLL OF HONOUR.

Although bee-keeping is considered a minor pursuit, we venture to say that it has provided more fighting men than the usual average of any industry. To place on record the part the members of our craft have played in the present war we propose to make a "Roll of Honour," and shall be pleased if our readers will forward us the Names and Addresses, together with the Regiment and Rank, of any bee-keeper serving his King and Country at home or abroad; also if killed or wounded.

We print a further list of names to those sent in, and shall be pleased to have other names as soon as possible.

Capt. J. L. D. Williamson, 3, Gunnersbury Avenue, Ealing Common.—14th East Yorks.

Louis Courtriendt, 68, Cromwell Road, Luton.—Belgian Army. Wounded in the early stages of the war, and since domiciled in England.

BRITISH BEE-KEEPERS' ASSOCIATION.

The monthly meeting was held on Thursday, March 16th, 1916, at Shearn's Restaurant, Tottenham Court Road, London.

Mr. W. F. Reid presided, and there were also present Messrs. G. R. Alder, A. G. Pugh, A. Richards, C. L. M Eales, G. W. Judge, G. Bryden, J. Smallwood, T. Bevan, J. Herrod-Hempsall, Association Representatives: G. Hayes (Notts), G. Horscroft (Essex), Col. H. F. Jolly (Somerset), J. Price (Cumberland and South Staffordshire), W. H. Prior (Crayford and district).

Letters, expressing regret at inability to attend, were read from Miss M. D. Sillar, General Sir Stanley Edwardes, Messrs. T. W. Cowan and G. S. Faunch.

The Minutes of Council Meeting held on February 17th, 1916, were read and confirmed.

The following new Members were elected. Rev. B. Hale, Mr. J. Wheeler, Mr. F. Claridge, Mr. A. V. Campbell, and Mr. J. Steel.

The following Associations nominated delegates, and all were accepted. Cumberland, Mr. J. Price; Crayford, Mr. W. H. Prior; Norfolk, Mr. W. A. Deterding; Somerset, Col. H. F. Jolly; South Staffs, Mr. Talbot Clayton; Notts, Mr. G. Hayes; Bucks., Mr. E. F. Ball.

The financial report was presented by Mr. J. Smallwood, who stated that payments into the bank for February amounted to £34 8s. 6d., the bank balance at the end of February being £170 14s. 1d. Payments amounting to £33 17s. 6d. were recommended.

A vote of condolence with Mrs. Jannings for the loss of her husband, Rev. F. S. F. Jannings, was passed.

Council Meetings for the ensuing year were fixed for the third Thursday in the month, as heretofore, with the exception of June, which will be held at the Royal Show.

The Crayford Association applied for a Preliminary Examination on June 17th, and the same was granted.

Next Meeting of Council, April 20th, at 23, Bedford Street, Strand, London, W.C.

We hope to give a report of the annual meeting in our next issue.

SUSSEX BEE-KEEPERS' ASSOCIATION.

ANNUAL MEETING.

The annual meeting of the above Association was held at the Town Hall, Brighton, on Wednesday, March 15th. The Rev. D. L. Secretan, M.A., of Balcombe, presided. Others present included:—Mrs. Reece (Barcombe), Miss G. Savage, (Brighton), Miss A. W. Thomas (Lewes), Miss H. Pickering (Hove), Mr. B. J. Burtenshaw (Cuckfield), Mr. F. Kenward (Lewes), Mr. C. T. Overton, Mr. C. A.

Overton (Crawley), Mr. T. Sandalls, Mr. G. Knight (Rottingdean).

The retiring Secretary (Mr. C. A. Overton) presented the annual report and balance-sheet. The balance of cash and stock in hand amounted to £8 18s. 8d.

The Chairman, in moving the adoption of the report and balance-sheet, paid a fitting tribute to the late Marquis of Abergavenny, K.G., remarking upon the loss the Association had sustained by his death. Mr. Secretan caused much amusement by stating that he supposed his qualifications for taking the chair were that he had kept bees for some years, and been stung in most places: the worst he remembered was a sting over the eye, and he had to enter the pulpit looking like a prize-fighter. Sussex, he said, was an excellent county for bee-keeping. He also called attention to the large importation of foreign honey into this country, and which he thought proved that there was a vast market for the produce.

Mr. F. Kenward, in seconding the adoption of the report, said that in view of the trying times through which bee-keepers had been passing, the report and finances of the Association were exceedingly satisfactory. The report and balance-sheet were duly adopted.

On the motion of Mrs. Reece, the retiring committee and officers were thanked for their services, the chairman observing that he thought they had well earned the vote of thanks. Mr. C. T. Overton (Association's expert), in returning thanks, made reference to the "Isle of Wight" disease. He spoke of the marked decrease of the disease, and, although still with us, thought it was in a much milder form.

Captain Earl Winterton, M.P., was elected President for the ensuing year, and Mrs. Sharman, Sir Thomas Barrett-Lennard, Bart., Sir Stuart M. Samuel, Bart., M.P., Messrs. Randall, G. Davidson, W. A. Sturdy, and Rev. D. L. Secretan, as Vice-Presidents. Mrs. Morris, Miss Savage, the Rev. A. C. Atkins, Mr. B. J. Burtenshaw, Mr. Tickner Edwards, and Mr. W. C. Cowell were elected on the Committee.

The Rev. A. C. Atkins was appointed as representative to the British Bee-keepers' Association; Mr. C. T. Overton as expert; Mr. F. Kenward as Hon. Secretary; Messrs. W. Hill Hunter & Co., A.C.A., as Hon. Auditors.

Mr. Kenward, in proposing a hearty vote of thanks to the retiring Secretary, said that this occasion could not be allowed to pass without expressing appreciation to Mr. Overton for the excellent services rendered to the Association, and while wishing him success in his new sphere, all hoped it would not be long before he was safely back again. Mr. Burtenshaw, in seconding, thought that Mr. Overton should receive some recognition for services rendered. This met with general approval, and the matter was left in the hands of the Committee.

A discussion took place as to the best methods for popularising bee-keeping. Miss Savage thought much might be done in this direction amongst the school children.

Mr. C. T. Overton spoke of gratifying results obtained from Lectures given in schools.

Mr. A. Sandalls gave an interesting account of the keen interest shown by children, boys especially, at his apiary. Finally, it was proposed by Miss Savage, and seconded by Mr. Sandalls, that the Sussex Education Committees should be approached, with a view to including the subject of bee-keeping in their schools.

A hearty vote of thanks to the Chairman brought, what was admitted by all, a pleasant and successful meeting to a close.

F. Kenward, Hon. Sec.

BEES TO THE RESCUE.

Some reader may be looking to me for further remarks on how to help the bees to help themselves in the matter of "Isle of Wight" disease. In 1914 (March 26), Mr. G. W. Grant suggested that the pollen mite was "the cause" of the disease. By stating that the mite itself was found in the intestines of the bee, Mr. Grant laid himself open to ridicule at the hands of Mr. Crawshaw, who, in the number of May 7th, 1914, blew him out of court on that ground and on the ground that "*Nosema apis* has been authoritatively specified as the cause" of the disease.

The more scientific theory about the pollen mite is that its excrement forms a medium in which *Nosema apis* flourishes and grows from an endemic to an epidemic. Can we help the bees by making the pollen mite scarce in the hive?

Sulphur kills the pollen mite (it also kills the bee larva, and a strong dose kills the bee). The Americans think they can defeat the "Isle of Wight" disease as they defeat paralysis, by means of powdered sulphur. A good many of them gave reasons for their faith in the January 15 number of "Gleanings" of this year. Mr. O. S. Davis, California, for example, says: "We blew the sulphur all over the ground, hives and dead bees. The apiary smelled like his Satanic Majesty's proverbial palace; and I tell you the disease began to disappear at once." He thinks it neces-

sary to have sunshine to "cook a kind of gas" out of the raw sulphur.

That brings us to burning sulphur. One of our readers told us last September that he had apparently cured a stock by trying to kill it with an under-dose of burning sulphur. I immediately tried the same, and the result, though ambiguous, is rather in favour of the recipe.

I am keeping spare combs in a bath of sulphur smoke by frequently puffing a smoker-full at them in their boxes. When the bees want a new comb, I give them one reeking of sulphur, and I hope that it makes the atmosphere mite-proof for some days to come. Add young and vigorous queens and rigorous crowding of the bees on just so many combs as they can cover, utilise and police, and perhaps we can trust them to do the rest.—G. G. DESMOND, Sheepscombe, Glos.

CORRESPONDENCE.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

LABELLING HONEY.

[9250] I think the enclosed "Liverpool and Birkenhead" honey label deserves a free advertisement!

In large capitals, on a background suggesting honeycomb, appears

CHAPMAN'S
HEATHER
HONEY,

while in very small type (just the size of the individual cells of the comb) a sharp-eyed person may descry the word "flavoured" between "HEATHER" and "HONEY." Customers should not be compelled to make microscopic search on such a flaring label to find out whether a vital qualification may not be somewhere concealed in it.—R. MURRAY.

[The label, a sample of which our correspondent enclosed, is certainly calculated to give a wrong impression, but it does not infringe any law. Honey is not the only commodity which suffers from this practice, but the only thing to do, as the law now stands is, when purchasing anything, to make what our correspondent calls a "microscopic search" for what is a vital qualification.—EDS.]

THE SPREADING OF DISEASE.

[9251] May I beg a small space to correct Mr. Mace in his idea that I am indignant with him for persevering in his attempts to find a remedy for "Isle of Wight" disease. By no means, Mr. Mace! Experiment as much as you are able, and may you be lucky enough to discover a remedy—but please do *not* leave your germs exposed to all passing bees. Your experiment will lose nothing by giving the diseased combs and stores direct.

I would that none but experts, and only those situated in isolated districts, should attempt even this.

Germs of any kind, if needed to be kept for experiment, should be as carefully put under lock and key as the most virulent poison. It seems to me that there are only two ways in which to end the disease—one, to let it run its course until all suitable media are finished—a long process. The other, to fight it by burning or disinfecting all contaminated articles—a much more English method.

I feel confident that it is in the power of beekeepers themselves to eradicate this plague if all would act together, and this by the same treatment that was given so successfully to the outbreak at Swanley—a treatment in which the "immune bee" can assist.—FRANK HATTON.

MR. MACE AND IMMUNE BEES.

[9252] I was much interested in Mr. Mace's article in the BRITISH BEE JOURNAL re "Immune Bees." I have always held Mr. Mace's opinion as to our finally finding a strain of immune bees. But I ask the question, "Would the bees still continue to be immune in any other locality?" I give herewith my own experiences with a certain strain of bees which I have at times purchased from an old friend of mine who lives some miles from here in the country. I purchased the first two stocks from him about ten years ago, and they did well and flourished exceedingly till four years ago, when "Isle of Wight" disease visited here and cleared everything in the bee line. I have started twice since with bees from him, the last being obtained two years ago. I took a friend with me, who also wanted a

stock, as he had lost fifteen by "Isle of Wight" disease, and wished to start again. We visited them in March, 1914, and so unmistakable were the signs of "Isle of Wight" disease in the bees and surroundings that we declined to purchase any, and also told the old man that his bees had the disease and would soon be all dead. He was naturally quite upset, and we came home without any bees. But in the succeeding weeks he wrote me such glowing accounts of the bees and how well they were working that we decided after all to go out again and see them. We did so, and thoroughly examined them, and as they then seemed all right I purchased two stocks and my companion one stock. They did well, but one of my stocks died the following autumn and my friend's died in the late winter. My other stock died last autumn, all of "Isle of Wight" disease. Last spring the old man wrote me that he could sell us three more stocks. We declined them, but another friend of mine, who was also starting again, went out last July and bought three stocks. They were perfectly healthy, and when I saw this man before Christmas he said they were all right and strong. Again last autumn the old man offered us two more stocks, which we declined, though all are perfectly healthy as far as can be ascertained. Now, what I want to know is this, Are bees immune *only in their particular district?* Because when we saw those two years ago they were too unmistakably affected with "Isle of Wight" disease for us to buy on our first visit, and yet they seemed all right on our second visit and have been so since, but directly we move them from there they get "Isle of Wight" disease and die. My old friend keeps bees in what he calls *modern* hives, which are simply Tate sugar-boxes used just as they are, with strips of wood for frames to rest on, with room for your arm under the frames and between the frames and the side of the box. The section racks and what sections are left in them are left on all winter, never taken off, and bees are never interfered with or cleaned out. Sections are only taken off as filled, no dividers in racks, and the only covering the bees have in their "modern" hives are old rags and sacks, with pantiles and corrugated iron to keep off wet. He feeds them on sugar candy and sugar, the feeding process being carried out by a jam bottle containing a little of the above, being *laid on its side* on top of the frames or sections, the bees getting into the bottle and helping themselves. Yet there they are in perfect health, in all their dirty conditions. Now I ask another question, Do we *real modern* beekeepers take too much trouble with our bees, and make everything too nice and fastidious for them? I should like to see this immune question taken up, and I hope others will give their experiences in the BRITISH BEE JOURNAL.—CHARLES CURTIS, Stoke Bishop, Bristol.

"ISLE OF WIGHT" DISEASE AND IMMUNE BEES.

[9253] I was very pleased to see a letter from Mr. Herbert Mace in the BEE JOURNAL of February 10th, in which he gives an account of some stocks of bees which appear to him to be immune from the "Isle of Wight" disease. If this is so, it sets one thinking, why should some bees be immune and others not? If bees were left to themselves, and not interfered with by man, what would happen when disease breaks out? Surely Nature would not permit the bees to be exterminated! What I believe would happen is that the disease would run its course unchecked, and some few stocks would win through; these, in time, would repopulate the country with bees, and having had the disease and survived, though not absolutely immune, they would be less liable to contract it again for some time, or only have it in a mild form, in the same way as man, having had a disease, is generally less liable to that disease afterwards. The longer this immunity lasted, the more would the bees increase in numbers, but, on the other hand, the more severe would the disease be likely to be when it returned—thus does Nature act. It is the same with the vegetable kingdom, Nature is ever trying to keep the balance, chiefly in this case by means of blight and disease.

One reason why disease is so persistent with us, is, that we are constantly introducing fresh stocks in infected areas before the disease has died out, and thus adding more fuel to the fire. There is one aspect of the disease which has been noted by some writers, and that is that affected stocks are constantly swarming. Certainly in this neighbourhood it has been very marked. I have kept bees for more than 40 years, and have never known so many swarms as there were during last year. Considering that most of the stocks were diseased and weak, this is remarkable. Surely this must be a natural instinct of the bees, who are trying to rid themselves of the disease, by leaving it behind them.

In conclusion, I should like to call attention to what I believe is a hopeful sign, that is, that the disease is not quite so virulent as it was in those parts that first had it, and I fully expect to see a further improvement as time goes on. If a remedy

can be found it will greatly hasten that good time, although, as I have already said, I do not believe in complete immunity.—E. H. Oldham, Chudleigh, Devon.

TRADE CATALOGUES RECEIVED.

Messrs. Steele & Brodie, Wormit Works, Wormit, Scotland.—There is in this catalogue a wide range of fully-illustrated appliances. Being situated in the country where the best heather honey is produced, this firm stock more types of "heather" hives than most manufacturers. We notice that with true Scottish pertinacity they still describe "racks" as "crates." Prices, of course, are "up," but to a very moderate extent. There is one other small item to which we might draw the firm's attention—the catalogue is not dated, and though previous lists are cancelled, there is nothing to show a prospective customer whether he has the latest or a "previous" list. Catalogues may be had post free on application.

Messrs. Dadant and Sons, Hamilton, Illinois.—This old-established American firm again send us their latest catalogue. Although it is not likely that hives will be imported from America, there are several appliances listed that are not usually found in British catalogues.

Notices to Correspondents

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H. J. S. (New Malden).—*Transferring bees from skep to frame hive.*—Fit the frames with full sheets of worker foundation, place them in the brood box, and cover the top bars with a sheet of American cloth or other material, in the centre of which cut a hole about 3 inches less in diameter than the bottom of the skep. Place the prepared hive on the stand occupied by the skep, lift the latter from its floor-board and set above the frames. Pack round the bottom of the skep with warm coverings so as to make the lower hive as warm as possible. When eggs and larvæ are found in the lower combs, remove the skep and ascertain if the queen is also on them. If she cannot be found you must "drive" the skep until she is secured and placed in the new brood box. A queen excluder is then put over the top bars and the skep replaced: in about twenty-two days all the brood in the skep will have emerged from the cells, and it may then be removed entirely, leaving the bees established in the new hive. The skep should be placed over the frames at the end of April or beginning of May, when it is beginning to become crowded with bees. They will, of course, use the entrance to the frame hive, and have to travel through it up to the skep.

"Painter" (Dorset).—Yes. It will not affect the honey.

L. W. J. Deuss (Nyasaland).—Extract when all brood is sealed, allowing the cages to travel no faster than is necessary to remove the bulk of the honey.

W. M. (Lymington).—It may be used for human consumption.

Beginner (Hackney).—(1) Yes, but commence by getting a good handbook and studying it. Get the "British Bee-Keepers' Guide Book"—1s. 6d.—or if you want a cheaper book, "Bee-Keeping Simplified," 6d. The former may be had from this office, post free, for 1s. 8½d., the latter for 7d. (2) Get one with two "compartments" above the brood box. (3) A new one. (4 and 5) Better buy them now. You might have to wait a considerable time for a swarm, and you are more likely to get surplus this season from a stock. (6) Transfer them before they swarm: see answer to H. J. S. (7) Not so likely if moved now. Place some obstruction in front of the entrance for a few days after moving, a handful of *loose* hay, or a piece of plain glass reared in front. (8) Yes, until you know more about them. (9) Feeder, foundation, veil, smoker. If you work for sections—section rack, sections, and dividers, if for extracted honey, shallow frame boxes and frames, and an extractor. (10) Yes: you are more likely to keep free from disease. (11) You could fit it up yourself by following the instructions in the book. (12) See chapter on Diseases in Guide Book. (13) See answer to query (1). We are always pleased to give advice, but do not send quite so many queries at once.

C. D. (Chippenham).—(1) About 4 ozs. of 40 per cent. (2) Give them as long as possible up to three months. (3) Yes. (4) Probably if given three or four months' treatment; but there is a doubt about it. (5) Yes; the same as the brood chamber. (6) Yes. (7) Very little. You can sit for the Intermediate exam. this year. Give a month's notice.

Suspected Disease.

H. BRAITHWAITE (Doncaster).—The comb contained foul brood of old standing. The bees were affected with "Isle of Wight" disease.

G. HAYWOOD (Chesterfield). W. G. BENNITT (Dudley).—It is "Isle of Wight" disease.

Special Prepaid Advertisements

Two Words One Penny, minimum Sixpence. *Will aavertisers please read these Rules carefully in order to save trouble, as they will in future be strictly adhered to.*

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not permissible at above rate, but will be inserted at 1d. per word as* **"Business"** *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of 5s. per ¼in., or 5s. per inch.*

PRIVATE ADVERTISEMENTS are only intended for readers having **Surplus Stock to** *dispose of.* **Driven bees, Nuclei,** *and* **Queens that are reared or imported for sale,** *are Trade Advertisements, and can only be accepted under trade terms.*

Advertisements must reach us NOT LATER than FIRST POST on TUESDAY MORNING for insertion in the "Journal" the same week.

Orders for three or more consecutive insertions in "The Bee Journal" entitle advertisers to one insertion in "The Bee-Keepers' Record" free of charge.

PRIVATE ADVERTISEMENTS.

APIARY FOR SALE, twenty-four box hives complete, six skeps wintered, 180 brood combs, young queens; early May swarms booked. —KIRSTEN, Southborough, Tunbridge Wells. v 65

WANTED, queen, Italian or Dutch preferred. —S. BAILEY, Oak View, Two Mile Ash, Horsham, Sussex. v 64

2 CWTS. light Cambridgeshire honey, fifty-six tins, 65s. per cwt.; sample 6d.—BARNES, Burwell, Cambs. v 66

SIX W.B.C. shallow boxes, with drawn out frames, 2s. 6d. each; a few W.B.C. body boxes, 1s. each; shallow boxes, 9d. each; particulars, stamped envelope.—J. YOUNGER, 29, Newmarket Road, Cambridge. v 67

TO LET, furnished, country villa (War duration), Somerset's finest honey district, large fruit garden.—MOORE, The Hollies, Foxcote, Radstock, Bath. v 68

WE have for sale a number of Bee Books, some very old; returnable list and prices will be sent for 1d. stamp.—MANAGER, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

FOR SALE, twenty-two W.B.C. hives, new in 1913, in excellent condition, having had two coats of paint each year, 8s. each.—J. STRATTON, St. Andrews, Warminster, Wilts. v 50

FOR SALE ¼ plate Koilos camera, with Goerz Dopp anastigmat f/6.5 lens, can be used either for hand or stand work, twelve single dark slides and film pack carrier. The whole packs in stout block leather sling case, 9in. long, 6in. deep, and 2½in. wide; also light brass telescopic tripod, in leather sling case, all in excellent condition, and used by me to take the illustrations in "Helpful Hints" and "Continental Wanderings." The outfit for sale in one lot for £6; reason for selling have bought a Reflex. A splendid opportunity for anyone wanting a good reliable camera. Will send on approval; Deposit.—HERROD, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

EXPERT would undertake Spring Tour; experienced.—"EXPERT," "B.B.J." Office, 23, Bedford-street, Strand, London, W.C. v 49

WANTED, cloth-bound copy "Bee-Keepers' Record." Vol. 7, year 1889.—HERROD-HEMPSALL, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED, good lantern slides on poultry-keeping.—Price and particulars to CHANTICLEER, "B.B.J." Office, 23, Bedford-street, Strand, London, W.C.

WANTED, the following: Cloth editions "British Bee-Keepers' Guide Book," 3rd 4th, 5th.—HERROD, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

SIX W.B.C. hives, legs, lift, zinc roofs, and ten standard frames, 15s. each; twelve shallow frame racks, 1s. 3d. each, with eight complete wired foundation frames, 2s. 3d. extra; twelve section racks, 1s. 3d. each.—ADVERTISER, "BEE JOURNAL" Office, 23, Bedford Street, W.C.

BUSINESS ADVERTISEMENTS.

NEW and secondhand foundation machines for sale.—S. J. BALDWIN, The Apiary, Bromley, Kent.

COMFORTABLE APARTMENTS for Brother Bee-keepers visiting Douglas. Terms: Tea, bed, and breakfast, 3s. 6d.; or full board, 5s. per day.—HORSLEY'S, Merridale House, top of Castle Drive, Douglas, Isle of Man.

WANTED, 2grs. sections; also extracted honey in 1lb. bottles, at 9s. per dozen, carriage paid to Cardiff.—ROWE, 28a, Moy Road, Cardiff.

LIMITED quantity shop-soiled Bee Goods for sale; undoubted bargains; list free.—JOHN DE BURGH LEAKE, Montpelier-hill, Dublin. v 43

SOFT Bee Candy, medicated, plain, or with pea flour, 1lb. glass top boxes, 7½d., postage 5d.; 2lb., 1s. 3d., postage 6d.; reduction for 7lb. and over.—Box 999, "B.B.J." Office, 23, Bedford-street, W.C.

COLONIAL HONEY.—LEONARD HALL & CO., 132, Queen Victoria-street, London, honey importers and packers for H.M. War Dept., the leading stores, &c.

EGGS for hatching and day old chicks, from noted strains, for winter laying; eggs, 5s., 7s. 6d. dozen; chicks, 8s. 6d. and 10s. 6d. dozen; free catalogue on application.—DOLLIS PARK POULTRY FARM, Church End, Finchley, N.

AVOID STINGS. BUY A PAIR OF

REYNOLDS' FAMOUS

"BURKITT" BEE GLOVES.

Price 3s. per pair, or with self-adjusting sleeves, 4s. per pair.—From EDWARD REYNOLDS, Glove Manufacturer, Andover, Hants.

BRITISH BEE-KEEPERS' ASSOCIATION.

The Council of the British Bee-Keepers' Association are anxious to obtain gifts of honey for the wounded soldiers in the London Hospital, where it is urgently needed both for food and medicinal purposes. They will, therefore, be grateful for gifts of same, no matter how small, from bee-keepers throughout the British Islands. It is unnecessary to explain our obligations to these brave fellows, who have sacrified health and limbs for the sake of our country. Gifts should be sent addressed to the Secretary, B.B.K.A., 23, Bedford Street, Strand. The donors' names will be published in the "B.B.J." and RECORD.

W. HERROD-HEMPSALL,
Secretary.

HONEY FOR LONDON HOSPITAL.

Amount already received	...	228½ lbs.
Jas. Gladding	...	12 ,,
Total	...	240½ lbs.

This is the second donation sent by Mr. Gladding, who has been serving with the R.F.C. in France since last summer. He is a most keen bee-keeper, and anxious to do all he can for the soldiers in hospital.

A ROLL OF HONOUR.

Although bee-keeping is considered a minor pursuit, we venture to say that it has provided more fighting men than the usual average of any industry. To place on record the part the members of our craft have played in the present war we propose to make a "Roll of Honour," and shall be pleased if our readers will forward us the Names and Addresses, together with the Regiment and Rank, of any bee-keeper serving his King and Country at home or abroad; also if killed or wounded.

We print a further list of names to those sent in, and shall be pleased to have other names as soon as possible.

Capt. Bryant, Target House, Hexham—Durham Light Infantry.

OBITUARY NOTICE.

REV. F. S. F. JANNINGS, F.E.S.

The news that the Rev. F. S. F. Jannings had passed away, briefly announced in our issue of March 9th, was somewhat of a surprise, for, although we knew he had been unwell for some time, we hoped he would eventually recover, but this was not to be, and the end came suddenly on the morning of Sunday, March 5th.

The Rev. Frederick Sharpe Falconer Jannings, M.A., was 60 years of age. He was the only son of the Rev. George Jannings, who was Vicar of Thorne for several years, then Rector of Warmsworth, and who died in 1894 at the age of 67. The family have been connected with Doncaster for many years. The late Rector's father was Vicar of Thorne 23 years, and removed to the Rectory at Warmsworth in 1879, so that his son, who has just died, passed his early life at Doncaster, Thorne and Warmsworth. The son, the late Rector, was educated at Worcester College, Oxford, and Durham University. He was ordained in 1892, and held a curacy in the Isle of Man until 1894, when he took priest's orders and succeeded his father as Rector of Warmsworth-cum-Edlington, appointed by the late Mr. H. Battie Wrightson. He married in 1890 Emily Bessie, the youngest daughter of General Faber, R.E., who survives him.

During his term at college Mr. Jannings was a noted athlete, and held several athletic records, which we believe have not yet been broken. He devoted himself to his country living, where he put in a great amount of hard work, the strain of which he often felt, and which, no doubt, helped to shorten his life. For some time he was Chaplain of Doncaster Workhouse. He was a member of a literary society, before which he read several papers, and was also a Fellow of the Entomological Society.

Mr. Jannings was fond of a holiday jaunt, and he often took chaplaincies at Continental resorts in order that he might gratify a reasonable wish to see some of the world. It was in pursuance of this idea that a couple of years ago, just after the foundering of the "Titanic," he went to Canada as chaplain on board the R.M.S. "Alsatian," and our photograph shows him wearing his naval cap.

He was a most enthusiastic beekeeper, and was very proud of his certificates, as he successfully passed each examination, taking his final certificate in July, 1915. Of an inventive turn of mind he was continually devising various appliances, his almost invariable idea being to evolve something that any beekeeper could make for himself. No doubt many of our readers will remember the unique collection of various waxes which he exhibited at the B.B.K.A. annual meeting and at the Royal Show last year. He had obtained these from all parts of the world, some of them, we know, with the greatest difficulty. As a member of the Council of the B.B.K.A. he was present at most

of the meetings, although living so far away from London.

The places of such men as the late Mr. Jannings are hard to fill. We have known him for quite a number of years, and have lost another personal friend for whom we had the very highest regard.

The funeral took place in the little churchyard of Warmsworth on Wednesday, March 8th, a numerous company of relatives and friends being present. There were a large number of wreaths, including beautiful floral tributes from his widow and aged mother.

In pursuance of the express wish of the deceased, the coffin was of white wood painted black and surmounted by a white cross.

THE LATE REV. F. S. F. JANNINGS.

BRITISH BEE-KEEPERS' ASSOCIATION.

ANNUAL MEETING.

This was held at Shearn's Restaurant, Tottenham Court Road, London, on Thursday, March 16.

There was a good attendance at both the general meeting and the conversazione. This is very gratifying, and shows that, amid all the anxiety and worry of the present time, the members of the Association are doing their best to keep things going until happier times, when bee-keepers will be able to follow what is essentially a peaceful avocation, free from war's alarms.

Mr. W. F. Reid presided in his usual

able manner, and in presenting the report said:

"You have all had copies of the report, so there is no need for me to read it. Of course, at a time like this, we see all around us societies either being suspended or held up, or extinct altogether, not through lack of interest, but on account of the impossibility of carrying on all the engagements that they had before the war. You have heard from the minutes of the last meeting that we were able to present you with a very satisfactory report on that occasion, and we may congratulate ourselves this year upon the state of affairs with regard to our Association. I may emphatically say, very good cause of congratulation, thanks to the energy of Mr. Herrod-Hempsall, and members of the Council, we have been able to keep the flag flying; we are still in good working order, and maintaining our position and doing the work which we have been able to carry out from the beginning. Of course, you know very well, not only the war, but also the great amount of disease among bees throughout the country, causes members to lose touch with the Association, which no personal work can avoid. With regard to the disease good work is being done. Of course, anything the Association can do for the affiliated associations they will be quite willing to do, to stamp out this terrible disease. I have some slight knowledge with regard to the work of the Board of Agriculture, of their secret remedies, etc.; a great deal of this secrecy should be avoided. I think that if they were a little more open we would be able to help them. They have us at their beck and call for any assistance they may require. We would be quite willing to help them to conduct any experiments in a practical manner. There are too many of these secret remedies. We might help by communicating to each other anything we know and anything we do, and so create a little more interest in this subject, and it would be well for them to communicate to us a little more about the work that they are doing with public funds. (Hear, hear.)

"We have lost Mr. Richard Brown, well known to us all, one who was always willing to help. Those who attended the exhibitions knew his genial manner, and how willing he always was to assist anyone who wanted help. I am sure we all regret his loss very much. By the recent death of the Rev. Jannings we have lost a most enthusiastic bee-keeper. We all knew his kind and courteous manner, and the way in which he always collected information from sources where one would least expect to find it. I am quite sure we all regret his loss very much indeed.

"With regard to the finance. Our position at the end of December, I think I may say, was good, considering everything.

"With regard to the Development Fund, we have great cause to thank the Commissioners, who have administered the fund, for what they have done for us, and, from the general point of view, helped bee-keeping very considerably by the amount they were able to grant us.

"We have negotiated with the London County Council, and Mr. Herrod-Hempsall has done a great deal in arranging matters with the Parks Department of that body. We have got an excellent site for our apiary, even better than the Zoo, and easy of access. Although we thought at the moment the removal from the Zoo would be a blow to us, and might give us a set-back, we now find ourselves in a better position than before.

"The work at Swanley College has been continued. That very good work has been done is shown by the fact that our bees there have kept free from infection, although disease is very close to them, which shows great care in management.

"The library is more popular now than formerly. I can remember a time when it was at Hanover Square, it was very difficult to find a book without a great deal of trouble. Now, everything is in apple-pie order. We have a catalogue, each book is numbered, and you can find books quite easily.

"Exhibitions. We had some doubt as to whether we should be able to carry on the 'Royal Show,' but you will see we did carry it out very successfully, and occupied a very prominent position in the show-yard. I am also pleased to inform you that we shall participate in the show again this year. (Applause.) Even before this show comes round we may find that the war is over.

"With regard to the prize of the W.B.C. hive, we are very much indebted to Col. Jolly in coming forward and giving us that as a prize. It shows what a great interest he takes in the Association, and we thank Col. Jolly for his kindness. He is good enough to repeat his kind offer for the next show, and we are still more indebted to him for this further evidence of his generosity.

"Examinations have been carried on in the usual way. The number of candidates was not quite so great as usual. We have now a very high standard for our certificates; therefore all those who obtain them really deserve them. In the olden days it was hard to keep up the high

standard, as it was difficult to find people who were familiar with the teaching of bee-keeping.

"You know at the last annual meeting we had a very interesting lecture, for which we were indebted to Mr. G. Hayes.

"The last remark the Council make is their gratitude to the Editors of the BRITISH BEE JOURNAL. Many associations have given up their reports. Such reports are a means of keeping members of an association together, and here in our association we can always rely on the BRITISH BEE JOURNAL to publish our reports, etc. I am sure we are very much indebted to them for their courtesy in spreading news through the country. I think these are the main points. Our thanks are also due to Mr. Smallwood for taking so much trouble with regard to the finance of the Association."

(*To be continued.*)

CRAYFORD BEE-KEEPERS' ASSOCIATION.

This flourishing local association has already over 100 members, but it is out for "fresh worlds to conquer," and on Wednesday evening, March 22nd, made an invasion of Sidcup in search of new members. Mr. A. Dewey, this year's president of the association, presided at a well-attended meeting held at Christ Church Parish Hall, and Mr. W. Herrod-Hempsall, F.E.S., the secretary of the British Bee-keepers' Association, gave his lecture on "The Pleasure and Profit of Bee-keeping."

In introducing the lecturer, Mr. Dewey alluded to the successful career of the association, which had its cradle at Crayford, but now numbered among its most enthusiastic members many bee-keepers in Dartford, Wilmington, Bexley, and Sidcup. The association was under a debt of obligation to Mr. Stoneham for his generosity in the past and for the delightful meetings in the pleasant grounds of Orchard House, and also to Mr. J. M. Bates, who had done much spade work as hon. secretary. Mr. G. W. Judge, of Shepherd's Lane, Dartford, had now taken over the duties of hon. secretary, and an effort was being made to extend a knowledge of the association's work over a wider district. The association held outdoor meetings in the summer, and lantern lectures and discussions in the winter months, and the subscription was a nominal one of 2s. per annum.

Mr. Herrod-Hempsall then gave his lecture, which he delivered with that felicity of language with which he makes the subject clear to non-bee-keepers as well as full of interest and instruction to those who already keep bees. He spoke in praise of the efforts of the Crayford Bee-keepers' Association to extend the pursuit of bee-keeping in the county of Kent, and paid it the compliment of saying that he knew of few societies carried on with the energy, enthusiasm, and knowledge that this was. He pointed out that in a fruit-growing county such as Kent bee-keeping was of very great assistance in pollenising the fruit-blossoms, for although other insects also did this work, 85 per cent. of it was done by hive-bees. By the aid of slides (of which he possesses a unique collection) the lecturer lucidly explained the advantages of the modern bar-frame hive over the old skep, and especially recommended the use of the "W.B.C." type of hive, that designed by Mr. W. Broughton Carr 25 years ago. This hive is double-walled, thus rendering it warm and dry in winter and cool in summer, and it lends itself to that scrupulous interior cleanliness which is so important an asset in bee-keeping. Slides showing how the hive is built up—first the brood-chamber, then the excluder zinc, then the section-rack, and finally the quilts for warmth, and the roof—made clear to the beginner how to go to work. Then followed a series of actual photographs of the lecturer manipulating hives in his own apiary, which gave an excellent idea of how the racks of honey are taken off at the close of the honey-season.

Mr. Dewey was at the lantern, and the audience expressed their appreciation at the end of the evening by asking many questions of the lecturer, to which he replied.—*Communicated.*

SUFFOLK BEE-KEEPERS' ASSOCIATION.

ANNUAL MEETING.

The annual meeting of the Suffolk Bee-keepers' Association was held at the Town Hall, Ipswich, on Tuesday, the chair being taken by Mr. T. Edgar Mayhew.

The Secretary (Mr. Oliver Jones) stated in his report that the year 1915 was a very disappointing one as regards the honey yield, the weather being wet most of the time the bees should have been flying. Reports of the presence of "Isle of Wight" disease were received in large numbers, and, there being considerable difficulty in obtaining experts with time to spare several members had not had the attention they might wish. Examinations in bee-keeping were held, and several members gained certificates. The membership had been well maintained, and if disease could only be exterminated the Association would continue strong and flourishing. Only 50 lbs. of honey had been collected for wounded soldiers, as against 1,000 lbs. in the previous year, a difference

accounted for by the weather and the loss of bees. Thanks were due to Mr. T. Edgar Mayhew for the use of a room, and to Messrs. F. Elliott, T. Payne, W. H. Hudson, C. Block, and G. Nickalls and Miss Grace Woodward for giving lectures. Referring to the financial aspect of the year's work, Mr. Jones said he had anticipated a loss, but as a result of an effort to run the Association on business lines he was pleased to be able to show a small profit. Having mentioned the heavy loss the Association had sustained by the death of Mr. William Pretty, the Secretary said he would always be pleased to receive suggestions as to the greater efficiency of the Association.

On the motion of Mr. T. E. Mayhew the report was adopted.

Mr. A. G. L. Rogers, of the Board of Agriculture, at the request of the Association, attended to speak on the subject of the "'Isle of Wight' Disease," which, he said, was caused by the presence in the stomach of the bee of a protoplasm, known as the *Nosema apis*. This organism did not kill the bee until it arrived at the later stages of existence. There was not known to be any specific which would kill the final spore except destructive agents such as fire, and it was thus necessary, after an attack of the disease, the hive should be burnt out and treated with some corrosive substance, and that everything that had been contaminated should be put into the fire. In this connection, Mr. Rogers mentioned that the micro-organisms were very susceptible to sunlight and air. The history of the trouble was then dealt with. It took three years to spread over the island, which gave the disease its name, said the speaker, and then, following the direction of the prevailing winds, spread comparatively rapidly in a north-easterly direction. More slowly, in ever widening zones, the disease spread all over England, reaching Suffolk about three years ago. From this it was evident that if the cause of the wholesale loss of bees was to be destroyed it was of the utmost importance that movement should be very much restricted; those starting bee-keeping should fill their apiaries from their own district. As for the cure of the malady, it was pointed out that just as in the life of every living creature there was some period at which it was extremely susceptible to malign influence, it was necessary to ascertain the point at which the protoplasm responsible for the mischief could most easily be destroyed. From experiments it had been ascertained that the *Nosema apis* was most easily dealt with in the first two stages of its life; in the third it could sometimes be disposed of, but having reached the fourth period of its existence it was impossible to affect it. The disadvantage of this was that the presence of the organism could not be recognised until it reached the third stage, when the bee's recovery was a matter of extreme doubt. Two drugs had been discovered by Dr. Porter at Cambridge, which it was hoped, if administered when the disease was first noticed, would give the bees a chance of recovery. Parallel with research on these lines, it was proposed to take a small area in Buckinghamshire, and to put there samples from every hive sent to Miss Porter. Specimens from each hive would be examined, and if in the first stages the hive from which they were taken would be treated with drugs; if in the later stages the hive would be destroyed. By these means it was expected to test the drugs recommended. If these experiments proved the efficacy of the drugs, concluded the lecturer, it would be possible for bee-keepers to feed their bees upon them regularly, as they were quite harmless.

Mr. C. H. Bocock followed with a brief description of the year's experimental work in connection with the malady, the results of which he admitted were not very encouraging. There was, he said, a great difference in the resisting powers of various strains of bees, but he did not know of the existence of an immune strain. He had experimented with some Dutch bees, which had been sent to him, and they had all died of the disease. In his opinion re-queening did not ward off the trouble. Cleanliness was a great thing, and bee-keepers should make plentiful use of the painter's blow-lamp. It was also necessary to prevent the bees from robbing. In answer to a question with regard to so-called cures, it was pointed out that these probably killed the brood, and in that way caused a temporary recovery. The testimonials appearing with the advertisements, it was remarked, were sent by bee-keepers soon after the first trial of the remedy; the letters received later on were not published. (Laughter.)

Mr. J. A. Smith proposed a vote of thanks to the Chairman and the speakers, remarking upon the bad effect that the disease had had, indirectly, on the white clover. Mr. C. Block, in seconding the motion, said, with reference to Dutch bees, that he had attempted to give them the "Isle of Wight" disease, and had failed; they had refused to die. (Laughter.)

The motion was carried by acclamation.

Certificates of proficiency in bee-keeping having been presented, the Chairman, on the suggestion of Mr. Jones, asked those present whether it was their wish, in view of the losses sustained, that the Association should continue in being for another

year.—The motion was put, and it was decided that the Association should go on with its work. The meeting closed with the election of officers, the only change being the substitution of Miss E. White for Mrs. Durrant as a member of the Committee.

BLURTS FROM A SCRATCHY PEN.

PUGNACITY.

Man is essentially a combative animal, and, for the matter of that, so are all animals, but as developed in the superior creation, it creates that energy which forces him to those deeds of derring do and enterprise which we hear tell of. All very well and good if the escape valve lets off the superfluous steam in that form, but, unfortunately, it is not always so.

Satan finds some mischief still
For idle hands to do.

Men overflowing with this pugnacious spirit, unfixed as to which way it shall be directed, sometimes contrariwise go in for fisticuffs and for wars; then, indeed, it is all very bad and wicked. We have among us some who believe that this spirit should be suppressed, squashed out. I have an immense respect for conscientious objectors, the real article, not that which is labelled thus, to cloak cowardice, but these good people are simply attempting the impossible. The only place recorded in history where "Peace, perfect peace," existed was, if we may believe John Milton, the Garden of Eden. There, as he sings, the lion played with the lamb, and men had converse with angels. But this ideal state of affairs was agony to the mischievous individual mentioned above. He was always in strife, or fomenting it (combative energy wrongly developed), therefore, he needs must arouse the spirit of resistance in Eve. Why should she submit to the command not to eat the apple? That is how the game first started with us, and, fortunately or unfortunately, it has kept on ever since.

It is outside the object of the present "Blurt" to bother about the quarrels of other folk; there is quite enough to do to mind our own business, and to see how this bellicose spirit has descended upon us. Take our JOURNAL as an instance. Right away from 1874 there always seems to have been something to fight about. First it was the hives, some swore by the Stewarton, others by the Woodbury, and some still belauded the skeps, as of old. We have not got rid of that latter school, even to the present day. Then came the question of Associations. Out of the turmoil was born the British, one of the most bitter objects of animosity which ever existed to sling words at. Of course a public body stands up to be shot at, and must take the hardest hits it gets smiling, and the more good it does the more enemies it has. Seeing that the British has now carried on for 42 years, and, during that time, nothing has been too hot or too heavy to hurl at it, measuring it by this rule only, it must have done some good. Concurrent with the period of the formation of the British came the Honey Market question, something else to kick, and then—oh! but there is no end of the matter. To enumerate everything causing controversy, I should require a list as long as the index of our bound volumes.

Let me sum up by saying we are at the present time at it, "hammer and tongs," over the "Isle of Wight" disease. From present indications that will last until the war is over (nobody can venture to prophesy when that will be),and then, I suppose, we shall find some other hare to start.

So it is very evident that when Peace deserted the Garden of Eden, it found no resting place to set its foot. But I am not quite sure if that spirit of never taking things lying down, is not, in disguise, one of the best gifts that Providence has given us. In the earlier part of this article I stated that the combativenes of the animal (man) had led to enterprise. One simple example will suffice. What was it but the fighting nature so highly developed in the Elizabethan period, which led to the possession of all our Colonies? Any comparison between those glorious days and the petty controversies in our JOURNAL may savour of the ridiculous, but it illustrates my point, which is the same in the lesser as in the greater, that there is nothing to be gained without fighting. One might go on for ever talking platitudes and the abstract art of bee-keeping, and your JOURNAL would have no "go" in it. But get up a good "scrap," and interest at once is aroused. As a result, sometimes, how often I am not prepared to say, we do get some good out of these wordy battles. Business is enlivened by keen competition. Keen competition in the columns of the BEE JOURNAL enlivens that also. J. SMALLWOOD.

A DORSET YARN.

[This came too late for insertion last week.—EDS.]

After frost and snow, the little bees are very busy again, they are flying farther from home in search of pollen; I see they are carrying in a great deal just now, it must come from the gorse and male flowers of whithies, it is of that

colour; the brown natives are the busiest I have, and they fly farther afield. Just now the plum trees are getting white, and I have not seen the trees so thickly covered with blossom as they are this season; how wonderful that they should not have unfolded their flowers when those bitter north-east winds blew, 'tis the same with peaches, the pink petals did not unfold till the bitter wind had subsided, though they showed their tips for a month. The hazels, of which I wrote in February, have had a rough time, four-fifths of the male catkins are browned off with the frost, but just the upper fifth is full of pollen, and some of the little crimson stigmas of female flowers are still to be seen. The Jargonelle pears have suffered a great deal, as they were very forward, though not actually open, but they look very brown.

Crocuses are in great abundance; the speedwell on roadside banks are open, the lesser celandine opens when the sun shines; there will be abundance of early flowers for our little friends. The lovely flowering almonds and the brown-leaved plums were most beautiful in February, in Bournemouth, and to see the pink flowers with snow hanging round them is a sight not often seen in the Sunny South, yet so it was that very snowy Saturday the first week in March.

I went to see a cottager friend of mine last week; he says he has only one stock that has come safely through this scourge that is desolating the hives round here just now, still he is very hopeful of good swarms, as it is strong; he had only two box hives, of good make, but they went under. A new skep alone survives.

J. J. Kettle.

QUEEN-REARING AND INTRODUCTION.

(*Continued from page* 87.)

The breeding hive is shown at Fig. 57, and takes two combs; a feeder is arranged at the side, shown by dotted lines; it also has a telescopic lid.

Hang in this hive the frame of cups fresh from the nucleus and beside it place a comb of honey, filled and sealed to the wood of the small frame. No empty cells must be present or the queen will lay in them instead of in the prepared cells. As small colonies do not rear drones, even if drone cells are given, all the eggs laid will be fertilized ones.

Shake a few bees from a prosperous colony into a swarm-box, take it into a cool, dark place for a few hours, when the bees will cluster together. About 10 a.m. take the breeding hive, remove the comb of honey, and dip two cupfuls of bees into it, put back the comb of honey, and replace the lid quickly. The entrance is covered with a piece of perforated zinc to prevent the escape of the bees. The hive with the bees confined is then taken indoors to a warm room. At 4 p.m., the laying queen can be run in through the hole in the roof, and she will be accepted by the queenless bees. Allow the hive to stand in the room until morning, when it is taken out, placed on a stand, and the bees released.

If too many bees are placed in the breeding hive they will remove some of the honey from the comb and thus allow the queen to lay in the natural cells. Should this happen, remove the comb of honey and supply the necessary food for the sustenance of the bees by means of the wall feeder, very thick syrup or candy being used for the purpose.

Do not disturb for four days, when larvæ will be found in the cups. Fig. 58. Take the comb to the warm operating room and gently break away the cells, place them in holders, and put into hives or cell bars in a swarm-box (as illustrated at Fig. 52 and already described).

When sufficient inner cups have been removed and used, the cup-holding frame is refilled with newly-compressed ones and replaced in the breeding hive for a few more days.

In this way the bees in the breeding hive will supply ready placed larvæ for several days.

When sufficient cells have been secured the frame is removed and hung in the cold to kill the larvæ. It is then placed in a nucleus for the cells to be cleaned and polished ready for use at a future date.

The queen and bees are placed on about three standard combs in a nucleus so that they are ready when required again to be put into the breeding hive for securing more cells.

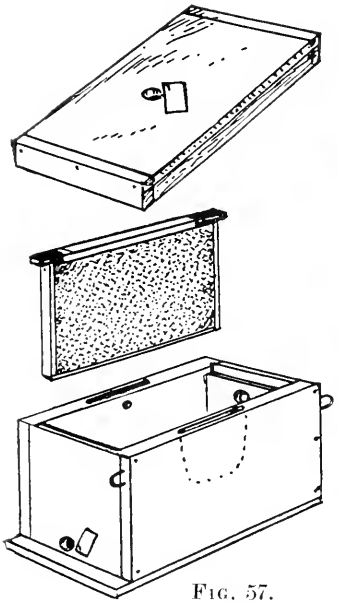


FIG. 57.

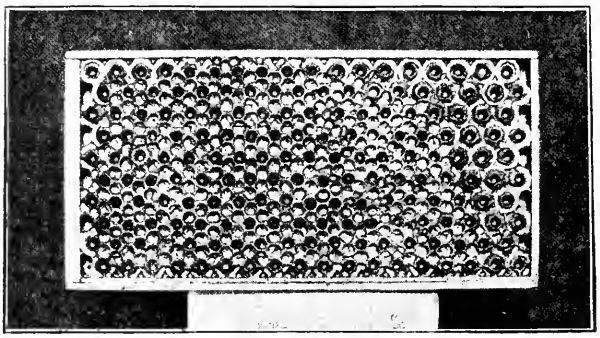


FIG. 58.

Having procured virgin queens by any of the methods given, it will be necessary to make preparation for obtaining their fertilisation by forming nuclei. As the term "nucleus" is applied to all occupied nucleus hives by many beekeepers, it will be well to give the following definition here. A nucleus is a stock in miniature—*i.e.*, it contains all the constituents of a full stock—*viz.*, hive, worker bees, fertile laying queen, brood and food; therefore until this stage is reached it is not a "nucleus, but "a nucleus in the making," or to use the common expression, "making a nucleus." If it is not desired to allow the queens to emerge in cages in strong stocks, the sealed cells, when ripe—that is, those from which the queen is due to emerge in a few days—can be finished incubating in nucleus hives from which the virgin queen when she has emerged, can take her marriage flight.

(*To be continued.*)

PRESS CUTTINGS.

PAINFUL ACCIDENT TO A CLERGYMAN.

"While the Rev. Mr. Stulting was camping out, one of his calves was attacked and stung to death by a passing swarm of bees."—*Cape Argus.*

We are informed by a contemporary that it takes 5,000 bees to make a pound. Bees, however, seldom congregate together for that purpose.—*London Opinion.*

TRADE CATALOGUE RECEIVED.

S. J. BALDWIN, Stanley Road, Bromley, Kent.—No doubt many of our readers will be pleased to see that an endeavour is being made to place this old-established firm on its old footing. The catalogue is well illustrated, and a number of appliances, invented by the late Mr. S. J. Baldwin, are listed. It is well worth perusal and will be sent post free on application.

CORRESPONDENCE.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

THE UNPROFITABLE SKEP (*page* 4).

[9254] Having already dealt with page 407 as gracefully as I could, from memory, I should like to ask Mr. Crawshaw if he is not confusing the issue a little, as this is clearly a case where the skep was profitable? I have not a fair recollection myself, but as Mr. Crawshaw asks for further details perhaps that is permissible. I have already pointed out that I would prefer "skeps of bees" rather than have no bees at all, but I would especially call Mr. Crawshaw's attention to the leading article, page 1, this is the issue, and then consider when disease of any kind shows itself, in which hive is it most easily detected, cured or helped.

"*Yellow thieves*" having made a similar remark about the "solid combs of brood." I may be pardoned for saying, that although this was the case up to the main honey flow, I have experienced no difficulty whatever in wintering without feeding: in fact, the reverse, as by August I have several times extracted from brood chamber, or inserted empty combs, to ensure autumn bees. There have been no colonies up to this year to steal from outside my own apiary, and in one case this was a colony of diseased black bees, from which, however, they did not contract disease. Former letters will show that I have lost over forty stocks since having them, so how can I conclude otherwise than that they are an "all round bee," or is it that my first virgin queen was crossed with a drone from a diseased brown stock?

Inoculation.—This theory is worth thinking about, if not experimenting with. It is practised largely in the case of human beings for several serious contagious complaints. My friend who helps me with my bees at present tells me that a swarm from my bees has again survived, so far, while a stock of natives by the side of it has succumbed.—A. H. HAMSHAR.

QUERIES AND REPLIES.

Queries reaching this office not later than FIRST POST on MONDAY MORNING will, if possible, be answered in the "Journal" the following Thursday. Those arriving later will be held over until the following week. Only SPECIALLY URGENT queries will be replied to by post if a STAMPED addressed envelope is enclosed. All queries must be accompanied by the name and address of the sender, not necessarily for publication, but as a guarantee of good faith. Correspondents are requested to write on one side of the paper only.

CLIPPING THE QUEEN'S WINGS.

[9044] What are the arguments against clipping the wings of queen-bees? I am assuming that there are such arguments, because I have not yet met a bee-keeper who clips his queen's wings.

I have noticed, however, that writers who discuss this subject generally advocate clipping, amongst them being Virgil, who, in his Georgics IV., advises it in order "to stop light-mindedness and idle games" amongst the workers, and Doolittle, in his "Scientific Queen-rearing," advises it in order to prevent loss of swarms. Also, in your book, "The Honey-Bee," the following words of Dzierzon are quoted:—"When she has begun to lay, we may, without scruple, cut off her wings."—CORNOR, CAERFYRDDIN.

REPLY.—The bees may resent having a maimed queen, ball her and rear another, especially if they have made attempts to swarm, which have been frustrated by the queen being unable to fly.

She may also, when trying to accompany a swarm, fall to the ground, and the bees being unable to find her she will perish.

Either of these things may happen without the knowledge of the bee-keeper, especially if a novice or inexperienced and when the young queen leaves the hive a swarm accompanies her. Young queens are vigorous fliers, and as the bee-keeper is not expecting or looking out for a swarm, quite likely it will be lost.

The quotation you give from Dzierzon is only part of the sentence, and should not be taken by itself, but in relation to the subject of parthenogenesis which is being dealt with.

Notices to Correspondents

Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. All questions must be accompanied by the sender's name and address, not necessarily for publication, but as a guarantee of good faith. There is no fee for answering questions.

NOVICE (Renfrew).—*Queen cells for Nuclei.*—The cells are obtained from colonies that have swarmed, or are preparing either to swarm or supersede the old queen, or they may be obtained as directed in the articles on "Queen-rearing and Introduction," now running in "Helpful Hints for Novices."

H. H. (Sussex).—*Rearing Drones.*— You may leave this to the bees, unless you wish to rear early drones in some particular colony. You may cut off the two bottom corners of the foundation in the brood frames. About an inch each way from the corner. Queens and drones are invariably reared in the same hive, but it does not by any means follow that a queen will mate with a drone reared in the same hive as herself.

R. D. (Bucks).—A cross between Native and Italian.—Do not feed if stores are abundant. If you wish to stimulate breeding you may bruise a little of the cappings twice or thrice a week as soon as the weather is favourable.

We are sorry your suggestion is not practicable, as conditions are so variable in different parts of the country.

X. (Lanark).—Yes, boil for half-an-hour.

R. ROGERS (Bishopstoke).—We are unable to say what the substance is without examination, it may be honey that has partially granulated. Could you send us a small piece of comb for examination?

Suspected Disease.

J. W. (Monton), GARDENER (Staffs), F. C. PAGE (Kettering), NOVICE (Burton).—It is "Isle of Wight" disease.

CAUSEY (Keswick), W. A. S. (Stockport).—We do not find any disease in the bees sent.

Special Prepaid Advertisements

Two Words One Penny, minimum Sixpence.

Will advertisers please read these Rules carefully in order to save trouble, as they will in future be strictly adhered to.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not permissible at above rate, but will be inserted at 1d. per word as* **"Business"** *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of 3s. per ½in., or 5s. per inch.*

PRIVATE ADVERTISEMENTS are only intended for readers having **Surplus Stock to** *dispose of.* **Driven bees, Nuclei,** *and* **Queens that are reared or imported for sale,** *are Trade Advertisements, and can only be accepted under trade terms.*

Advertisements must reach us NOT LATER than FIRST POST on TUESDAY MORNING for insertion in the "Journal" the same week.

Orders for three or more consecutive insertions in "The Bee Journal" entitle advertisers to one insertion in "The Bee-Keepers' Record" free of charge.

PRIVATE ADVERTISEMENTS.

EXPERT would undertake Spring Tour; experienced.—"EXPERT," "B.B.J." Office, 23, Bedford-street, Strand, London, W.C. v 49

WE have for sale a number of blocks of illustrations of readers' apiaries, &c., that have been used in THE BRITISH BEE JOURNAL and THE BEE RECORD; price 3s. each, post free; this is half cost price.—MANAGER, "BEE JOURNAL" Office, 23, Bedford Street, Strand, London, W.C.

EXCHANGE three healthy hives for healthy English colony in skep or frames.—C. HALE, 2, Kennington Road, Weston, Bath. v 76

FOR SALE, nine 28lb. tins extracted honey, granulated; best offer.—SEMMONS, Leiston, Suffolk. v 75

LADY wishes to hear of another with knowledge of bee-keeping with a view to starting a small apiary in Bucks.—"A. R.," c/o "BRITISH BEE JOURNAL" Office, 23, Bedford Street, Strand, W.C. v 74

FOR IMMEDIATE DISPOSAL, complete apiary (Birmingham), 25 stocks in new hives, 25 old empty hives, observation hive, extractors, bottles, and all appliances, all new last season; owner going abroad on military duties.—List on application to "B'HAM," c/o "BRITISH BEE JOURNAL," 23, Bedford Street, Strand, W.C. v 73

FOR SALE, splendid 1-frame revolving observatory hive, quite free of disease, £1.—KNIGHT, Kenwyn Apiary, Truro. v 72

FOR SALE, cheap, giving up, 15 hives, racks, clearers, extractors, ripeners, all appliances.—LACEY, Bestwall, Wareham. v 71

OWNER enlisted.—Will someone with thorough knowledge of work take charge of twenty stock apiary on fruit farm in Worcestershire; salary by arrangement.—BOX S., "BRITISH BEE JOURNAL" Office 23, Bedford-street, Strand, W.C. v 57

EXCHANGE, pure bred chickens for Italian or Dutch bees, stocks on frames, or skeps.—BECK, Airton, Leeds. v 77

BRITISH BEE-KEEPERS' ASSOCIATION.

The Council of the British Bee-Keepers' Association are anxious to obtain gifts of honey for the wounded soldiers in the London Hospital, where it is urgently needed both for food and medicinal purposes. They will, therefore, be grateful for gifts of same, no matter how small, from bee-keepers throughout the British Islands. It is unnecessary to explain our obligations to these brave fellows, who have sacrified health and limbs for the sake of our country. Gifts should be sent addressed to the Secretary, B.B.K.A., 23, Bedford Street, Strand. The donors' names will be published in the "B.B.J." and RECORD.

W. HERROD-HEMPSALL,
Secretary.

HONEY FOR LONDON HOSPITAL.

Amount already received ... 240½ lbs.

A ROLL OF HONOUR.

Although bee-keeping is considered a minor pursuit, we venture to say that it has provided more fighting men than the usual average of any industry. To place on record the part the members of our craft have played in the present war we propose to make a "Roll of Honour," and shall be pleased if our readers will forward us the **Names** and **Addresses**, together with the **Regiment** and **Rank**, of any bee-keeper serving his King and Country at home or abroad; also if killed or wounded.

We print a further list of names to those sent in, and shall be pleased to have other names as soon as possible.

Lieut. Stanley Webb, Newham Villa, Truro.

Driver J. Jackson, Glebe Farm, North Grimston, Malton—39th Reserve Park, A.S.C.

Pte. G. Cox, Idless, Truro, killed in action, February 23, 1916.

Pte. S. Carveth, Idless, Truro—D.C.L.I.

BRITISH BEE-KEEPERS' ASSOCIATION.

ANNUAL MEETING.

(*Continued from page* 100.)

Mr. Pugh: All previous reports have had, if I remember rightly, a list of experts. I think it should not be dropped; but it is probably saving paper.

Mr. Herrod-Hempsall: For economy sake the list was omitted this year, but it will not be dropped permanently.

Mr. Reid proposed that the report and balance-sheet be adopted, and it was carried unanimously.

The Chairman then said the next item on the agenda is a vote of thanks to the retiring councillors and officers. "I would like to say I am very much indebted to the Council; on many occasions they have undertaken duties for me, but my excuse must be that I have often been called away at a moment's notice on urgent war business. We all know that Mr. Herrod-Hempsall's soul is in the work, and how well he does it for us."

Mr. Bryden: May I move a vote of thanks to the officers who gave their services during the past year?

Mr. Pugh seconded, and it was carried unanimously.

Mr. Reid: I thank you on behalf of the Council for the kind vote of thanks which you have passed. We are anxious to do our best. We have had a very trying time, as you all know—worrying work as well as the ordinary routine. We feel sure that the work has been appreciated, and we are very glad to continue it.

ELECTION OF VICE-PRESIDENTS.

Mr. Eales: I propose that the vice-presidents, hon. members, and corresponding members, hon. treasurer, auditor, analyst and solicitor be elected *en bloc*.

Mr. Herrod-Hempsall: As a member of the Association, I would like to mention the good work of our treasurer. He has had a good deal of work to do, and has put himself to considerable trouble and inconvenience in regard to the investing of funds. Also that of Mr. Sander, our honorary auditor, who tried to get out of the work, but I would not let him. He said he did not know much about the work. Mr. Sander is very practical, more particular with the accounts than most chartered accountants I have encountered. Also to Mr. Mossop, who has done a great deal of work for the Association. I think that under these circumstances a special hearty vote of thanks should be accorded to these gentlemen for the work which they have carried out.

Mr. Judge seconded.

Mr. Reid: I heartily endorse what has just been said, and put the motion.

This was carried unanimously.

Mr. Sander: It is very kind of you. I am not an accountant, and only deal with accounts of the kind which come in the everyday routine of business life. For

anything I can do to help you are quite welcome.

ELECTION OF COUNCIL.

Mr. Reid: As I pointed out, we have lost the Rev. F. S. F. Jannings. We regret his loss very much. Unfortunately, there are others who canot continue with us. Mr. Attenborough has resigned, as he could not attend the meetings. Miss Gayton has been with us from very nearly the beginning. We shall be very sorry to lose her services. She has wished several times to resign, and now she says she must, and we must accept it under these circumstances. We do so with very great regret. Also Mr. Watson.

With regard to the delegates, I would like to say a word. A very considerable number attend the Council meetings. I do not think we have had more at any time than we have had lately. It shows that they take an interest in the work, and desire to help the craft. We owe them a very great debt of gratitude. There was a time when county associations took very little interest in the parent association, and their delegates did not attend meetings in London, and thought that little notice was taken of them. I am quite sure that that has wholly changed. We are only too pleased at any time for delegates to come up here; they do help us very materially, and I think we owe them a great debt of gratitude. They give valuable time, and go to considerable expense. The Council are indebted to them for their assistance. I would like to give a warm acknowledgment to them personally.

Mr. Horscroft proposed that the Council, as printed on the agenda, be elected *en bloc*, with the exception of the late Rev. F. S. F. Jannings.

Col. Jolly seconded, and it was carried unanimously.

(To be continued.)

The readers of the BRITISH BEE JOURNAL, and Mr. Hamshar in particular, who asks for a specific notice of an interesting controversial subject, will perhaps accept my apology for failure to write upon our hobby at present, as I am entirely unable to make or spare the time to do so, much though I may wish it.

Ever since the outbreak of war I have been fully engaged upon war work, not only the production of much-needed munitions, but the training of men, and the notes which I have been able to contribute to this column have only been produced with difficulty.

Such time as I can spare for bee-work has to be divided between my own bees and those of some others who have already gone into active service. So with reluctance and regret I make this apology, and look forward with the brethren of our craft to happier and perhaps more leisured times.—L. S. CRAWSHAW.

ANCIENT BEE LITERATURE.

III.—GODS AND BEES—*(Continued from page 67.)*

Rich as is the literature of Ancient Greece and Rome in legendary lore connected with gods and bees, the northern and eastern nations of Europe, as well as many countries in Asia, can boast of no mean share. The mythology of Scandinavia, the religion of our own ancient ancestors, had a host of greater and lesser gods, from among whom we may select Wodin or Odin, the god of war, and Thor, the thunderer, whose names are perpetuated in our Wednesday and Thursday. The paradise of the old sea warriors of the north, Valhalla, typified what was the highest dream of perfect enjoyment. There they were to sit feasting, and "drinking deep draughts of mead," a drink which, as is well known, is derived from honey. After toil came rest in this ideal paradise, and there they, weary-worn after a life of strenuous strife, reposed, waited on by fair virgins handing round the mead in the skulls of their enemies, happiest when they had imbibed so copiously that they were steeped in a species of intoxication, or glorified existence, enjoying perfect felicity. Extracts from "The Carousal of Odin" will illustrate this:—

"Fill the honey'd beverage high,
Fill the skulls, 'tis Odin's cry,
Fill the mead and spread the board.
. . . . . .
Virgins of immortal line,
Present the goblet foaming o'er,
Fill the bowl
That raised to rapture Odin's soul."

In very ancient books mead is described as the very "quintessence of honey," and as "nectar, that delicate drink of the gods." We are also informed it was believed in as a source of inspiration to the poet, and that it conferred strength and courage on the warrior in the hour of battle. One kind of mead was so potent

that a single cupful (no gauge of capacity is given) was sufficient to produce intoxication. Another kind was formed by mixing honey and blood, and we are informed that whoever partook of it became a scold or a sage, from which it appears this drink had either a deleterious or a soothing effect. In regard to the former we are told that Lōke, Thor's brother, found it "the source of many an ill," and we heard of Saturn "sunk in ebriety" from over-indulgence to its seductive claims. The milder kind was used in social intercourse, for we read that Odin visited the goddess of history, Saga, almost daily, and drank with her "mead out of a golden bowl." At the great feasts both sexes partook of it and honey so liberally that one writer tells us of "twelve sweet-meat makers asking for plates of honey," and another records that hosts of servitors dispensed the mead, filling up huge beakers for all.

In Russia, and generally through eastern Europe, they had a god, Bahilos, to whom they ascribed the first creation of bees, while they credited him with being the inventor of practical apiculture. He it was who first taught the art of bee-keeping, and carried on a general supervision of the industry. Needless to say, offerings were presented to him of this divine nectar. Bee-keepers thought so highly of this god that they made little waxen images of him, and placed one of these near each hive. Bees in these countries were, like the fairies, bringers of good luck, and honey gifted to the young conferred on them the gifts of eloquence and song. Bees were held sacred, and to kill them was considered a heinous crime. As in the case of Aristaeus, bees, after dying out in one district, were regenerated by the aid of one of their Muscovite gods. The myth is a very old one, and can be traced back to the earliest Egyptian records. Virgil, indeed, borrowed it from Egypt. A Russian prayer intercedes for all the children that come into the world, "May they be given money, bread, bees; and may the god cause the bees greatly to swarm, and make wax in abundance. Even as the wax increases in the hive so grant us all good fortune." In another Russian legend we find the bee employed as a messenger between the Power of Good and the Power of Evil, when by sitting on the Devil's head it reads his inmost thoughts and circumvents his evil designs.

Let us now turn for a short time to the Far East, where we find Kama, their god of love, one of the most pleasing characters in the literature of the Hindus. Their poetry is extensively taken up with his deeds and praises. Eastern mythology attributes to him powers at times even superior to those of Brahma. Kama is described, or represented, as holding in his hand a bow made of sugar-cane, and strung with bees. He also carries five arrows, each tipped with the blossom of a flower beloved by the bees, or with the points dipped in honey. He is a bright, handsome young man who wanders much all over the country, attended by his beautiful wife, Rati, and a crowd of humming-bees. At the approach of spring bees, wild and tame, constantly follow him—

"For at the call of spring the wild bees came,
Grouping the syllables of Kama's name."

Many of the love songs of these flowery lands refer to the song and flight of the bee, and the poets constantly connect the bees, the flowers, the nectar, and the bee-bread with which the one blesses the other.

"The mango powders its fine rod with many a bee
That sips the oozing nectar rapturously."

Kama himself, of course, receives offerings of honey, although nowhere do we hear that, like Cupid, he rifles honey from the hives, getting very properly stung for his pains.

In Persia they had a sun-god, Uithra, largely a counterpart of Apollo, who symbolises the creative forces of Nature. He is sometimes represented with bees following him, and at other times with bees seen issuing from his mouth. Honey is used liberally in the feasts held in his honour, and the priests who offer sacrifices to him washed their hands in honey and water, or in pure honey.

Many other gods might have been named, all custodians of the fields and gardens, to whom honey was a necessary offering. Being the protectors of bees, beehives and flowers, gifts were their due. It was an ancient custom to pour out copious libations of mead in honour of the dead, and in one of Lucian's comedies we have a question asked by Charon why this should be, which is answered by the god Mercury thus—

"I know not, ferryman, what use it can be
To those in Hades; but it is believed
That souls returning from the world below
Will come to supper—very probable.
Hovering above the savour and the smoke,
And from the trench will drink up the metheglin."

M.

(To be continued.)

WHITBY AND NORTH-EAST YORKS. BEE-KEEPERS' ASSOCIATION.

ANNUAL MEETING.

The annual meeting of the Whitby and North-East Yorkshire Bee-keepers' Association was held on Saturday afternoon, in Hood's Marine Café, the Pier. Mr. H. S. Horne presided, and there was a large company present, amongst whom were Mr. W. Burn, Mr. Hanson (Eaglescliffe), Mr. Kennedy, Mr. J. W. Jackson, Mr. T. Watson, Mr. T. Hood, Mr. C. R. Pinkney, Miss Brodrick-English, Miss H. Verity, Misses Horne (2), Mrs. A. T. Bulmer, Mrs. Lorains, Mr. H. T. Hallimond, Mr. J. W. Legg, Mr. C. A. Legg, Mr. W. Matthew, Mr. J. Shaw, Miss F. Rippon, and Mr. L. H. Smales (Hon. Secretary).

The Chairman said it was highly gratifying to see such a good gathering, especially as the weather was so bad and some of them had a long way to come from the country. It showed that they were interested even in a comparatively small way in increasing the food supply of the country as much as they could at such a critical time. As misfortune generally brought out the best qualities of the English people, no doubt the threatened ravages of the "Isle of Wight" disease in the district had also made them feel a commoner interest.

Lord Normanby was unanimously appointed President, on the proposition of Mr. J. Shaw, seconded by Mr. Kennedy.

The several Vice-Presidents were re-elected *en bloc*; and it was agreed that all subscribers of five shillings and upwards be appointed Vice-Presidents.

The present Executive Committee was re-appointed, with the addition of Mrs. Lorains, Mr. Kennedy; Mr. Matthew, and Miss H. Verity.

Mr. L. H. Smales was unanimously re-appointed Hon. Secretary and Treasurer, on the proposition of Mr. Hood, seconded by Mrs. Bulmer, it being remarked that Mr. Smales had made an excellent Secretary.

Mr. Smales returned thanks for his re-appointment, and said he would be pleased to continue for the present, as they wished it, and would do all he could for the Association. He was debarred from military service.

Mr. H. W. Nicholson was re-appointed Hon. Auditor, and thanked for his past services.

Mr. Hood was unanimously appointed hon. expert, on the proposition of Mr. Pinkney, seconded by Mr. J. Shaw.

Mr. Pinkney spoke of the gratitude of the Association to Mr. Hood for sparing time to attend to members' troubles. He was always willing to give help and advice.

In reply, Mr. Hood said he was sorry he could not spare as much time as he would like to the Association. He had intended giving up the appointment this year, but he would give as much time to it again as his business permitted, seeing the Association wished him to continue.

The statement of accounts, which had been audited by Mr. H. W. Nicholson, was presented by the Hon. Secretary, and showed that there remained a balance in hand of £8 11s. 2d.

The Hon. Secretary read his annual report, in the course of which he said:—"During my first year as Secretary, there is very little to report, as, owing to the unsettled state of the country, we were able to do very little propaganda work, our chief duty being to keep alive the interest of bee-keeping as a whole, and husband our resources for energy at a future time. The number of new members enrolled was 17, making a total membership of 123. There have been several cases of foul brood reported, and, unfortunately, 'Isle of Wight' disease is spreading in our district. Our hon. expert, Mr. T. Hood, visited one case at Guisborough, and gave all possible advice, but the bees have since all died. Our appeal for funds in regard to 'Isle of Wight' disease was badly supported, and we are not in the position to do much to stay the progress of the disease. Our financial position must be considered satisfactory, when we take into consideration the abnormal conditions which prevail; there is an increase of £2 1s. in subscriptions, and a balance brought forward of £8 11s. 2d. In addition, we have bought a supply of honey labels, which will last at least another year, unless there is an unprecedented run on them in the coming season. Much of the work of the Association lies in dealing with the individual necessities of members, and, consequently, does not come before the public notice."

The most important item for discussion at the meeting was the subject of "Isle of Wight" disease among bees, more reports having been received of members having found all their bees dead, or all but one or two stocks dead, under suspicious circumstances. Numerous cases of bees "dying out" were reported from Levisham, Danby, Goathland, Sleights, Ruswarp, and Eaglescliffe. The problem of combating this disease in the Whitby district was discussed by Messrs. Hood, Pinkney, Legg, Burn, and others. No real cure having been found, a somewhat gloomy future was predicted, if the progress of the disease was not stayed.

Mr. Legg, of Danby, described how his hives were attacked, and died out, with the exception of two or three in a separate field a short distance away. The disease

had apparently been brought to the district with bees from another county.

Letters were read from the Cumberland and Westmorland Bee-keepers' Association, outlining a cure receiving the attention of the Board of Agriculture, and asking the Whitby Association to contribute to the funds necessary to make a further trial of the remedy on a larger scale than hitherto, before the Board of Agriculture pronounced upon its efficacy to the public. It was decided to contribute £1 to this fund, and a resolution was passed recommending that the funds and work of the Whitby Association be mainly devoted to staying this disease during the present year.

A resolution was passed urging all bee-keepers to promptly notify the Association on the first appearance of disease, or suspicion of disease, in the interest of themselves and all other bee-keepers.

Mr. Hood mentioned cases of bees sent from the Whitby district which were the only ones alive when all other bees were dead, thus giving hope that Whitby bees may be to some extent more virile and better able to resist the disease.

The death of a member with the Forces in France was reported—Mr. T. A. Carr, of Scalby. He was an enthusiastic bee-keeper, and a keen supporter of the Association, having been present at many of its meetings.

The Secretary was instructed to write to his relatives, conveying the sympathy of the Association.

A vote of thanks to the Chairman terminated the meeting.

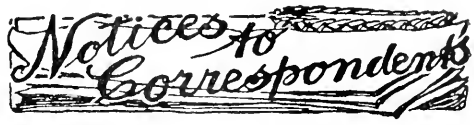
The members afterwards took tea together in the café below, when the discussion on bee matters continued.

A vote of thanks to Mr. Hood was passed for again providing the room for the meeting.—*Communicated.*

PRESS CUTTING.

THE LATE LORD CHANCELLOR'S OYSTERS AND BEES!

Lord Buckmaster's Larceny Bill, the humorist who is not a lawyer will rejoice to learn, provides that hawks, falcons and bees shall be "capable of being stolen." The two first-named will be well able, no doubt, to look after themselves and at the same time keep at a respectful distance from their human enemies, but a free pardon should certainly be allowed, in the interest of sport, to the individual who can purloin a swarm of bees without receiving a stinging rejoinder!—*From the "Daily Graphic."*



Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. All questions must be accompanied by the sender's name and address, not necessarily for publication, but as a guarantee of good faith. There is no fee for answering questions.

One of our readers inquires: "Is there any likelihood of being able to keep bees healthy within the district between the points—Brighton, Lewes, and Newhaven? I should like to know if the 'Isle of Wight' disease has been, or still is, bad there; and whether anyone has healthy bees in the district." Perhaps another of our readers may be able and willing to supply the information.

S. W. L. (Staffs.).—*Using syrup made last year.*—If it has not fermented, you may use it now. Strain and warm before giving it to the bees. (2) They would probably be all right if fumigated, but it would be better to use new ones.

Anxious (Sandbach). — *Stocks without brood.* We cannot account for this if the queens are there. The recent cold weather may be the reason, or a shortage of food. Give them some warm syrup in a slow feeder. This will probably stimulate brood-rearing.

"Durham" (Durham). — *Disinfecting Hives, etc.* — (1) Scorching with a painter's lamp is sufficient. To make doubly sure you may also wash out with a solution of carbolic acid, or Izal, and water. (2) Boil the metal dividers for 20 to 30 minutes. (3) Sprinkle the ground with lime—quicklime is best—and, if possible, dig it in.

G. S. Feltham (Bucks).—The Secretary of the Bucks B.K.A. is Mr. E. Ff. Ball, Nockhill, Denham.

Geo. Smith (Northants).—We have very little faith in it. In any case, it is only claimed that it will cure stocks that are very slightly affected. If your stock is bad you had better destroy it.

L. W. (Cheshire).—(1) There are various symptoms. The diseased bees become disinclined for work, crawl out on to the alighting-board, where they loiter about, often in little groups. Sometimes their abdomens are more or less distended, and frequently the wings are dislocated. They lose the power of flight, drop on the ground, and sometimes crawl for yards around the hives, or gather in little clusters, and sooner or later perish. In the summer-time the general symptom is the large number of "crawlers." In the winter or early spring colonies are found dead with abundance of stores, and with no apparent cause for their decease. In some cases there is much soiling of combs and hive, in others none. (2) No. (3) Burn them, or melt them down for wax. (4) It has been used for this purpose, but we cannot find the recipe just now. (5) You might try Izal, or one of the advertised remedies, but the best plan is to burn them, and disinfect the hives.

R. ROGERS (Bishopstoke).—We have received a piece of comb with no name attached, which we presume you have sent. The substance is honey that has granulated and then fermented.

Suspected Disease.

J. G. (Acklington), M. B. LLOYD (Bewdley), FRESH STARTER (S. Wales).—It is "Isle of Wight" disease.

H. ST. J. W. (Aylesbury).—It is "Isle of Wight" disease. You might try Dutch, but be prepared for swarms.

A. WELLS (Newark).—It is "Isle of Wight" disease. Destroy the contents of the hives—bees, combs and quilts—but the hives may be disinfected. Scorch them out with a painter's blow lamp, or paint them out with a solution of Izal, or Calvert's No. 5 Carbolic Acid, one part to two parts of water. Place out in the air for a few days till the smell has disappeared.

"BEAVER" (Yorks).—The bees were too dry for diagnosis, but so far as we could see appeared healthy.

M. WELLINGS (Kent).—The bees were too dry for diagnosis.

MR. NICHOLSON (Wilts).—It is "Isle of Wight" disease. The queen was among the dead bees.

Special Prepaid Advertisements

Two Words One Penny, minimum Sixpence.

Paid advertisers please read these Rules carefully in order to save trouble, as they will in future be strictly adhered to.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not permissible at above rate, but will be inserted at* 1d. *per word as* **"Business"** *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of* 3s. *per* ½*in., or* 5s. *per inch.*

"PRIVATE ADVERTISEMENTS are only intended for readers having **Surplus Stock to** *dispose of.* **Driven bees, Nuclei,** *and* **Queens that are reared or imported for sale,** are *Trade Advertisements, and can only be accepted under trade terms.*

Advertisements must reach us NOT LATER than FIRST POST on TUESDAY MORNING for insertion in the "Journal" the same week.

Orders for three or more consecutive insertions in "The Bee Journal" entitle advertisers to one insertion in "The Bee-Keepers' Record" free of charge.

PRIVATE ADVERTISEMENTS.

PRINTING PRESS, metal type, accessories, 10s. 6d., bargain; particulars.—W. WEBSTER, 291, Normanton-road, Derby. v 79

SALE, seven sound, healthy hives, 5s. each, or lot 33s.; particulars.—C. HALE, 2, Kennington-road, Lower Weston, Bath. v 78

EXPERT would undertake Spring Tour; experienced.—"EXPERT," "B.B.J." Office, 23, Bedford-street, Strand, London, W.C. v 49

WE have for sale a number of blocks of illustrations of readers' apiaries, &c., that have been used in THE BRITISH BEE JOURNAL and THE BEE RECORD; price 3s. each, post free; this is half cost price.—MANAGER, "BEE JOURNAL" Office, 23, Bedford Street, Strand, London, W.C.

FOR IMMEDIATE DISPOSAL, complete apiary (Birmingham), 25 stocks in new hives, 25 old empty hives, observation hive, extractors, bottles, and all appliances, all new last season; owner going abroad on military duties.—List on application to "B'HAM," c/o "BRITISH BEE JOURNAL," 23, Bedford Street, Strand, W.C. v 73

FOR SALE, splendid 4-frame revolving observatory hive, quite free of disease, £1.—KNIGHT, Kenwyn Apiary, Truro. v 72

OWNER enlisted.—Will someone with thorough knowledge of work take charge of twenty stock apiary on fruit farm in Worcestershire; salary by arrangement.—Box S., "BRITISH BEE JOURNAL" Office, 23, Bedford-street, Strand, W.C. v 57

EXCHANGE, pure bred chickens for Italian or Dutch bees, stocks on frames, or skeps.—BECK, Airton, Leeds. v 77

18LBS. of beeswax and 5lbs. of thin weed brood foundation; what offers?—THOS. WILCOX, Rosedale, Talywain, near Pontypool. v 70

STOCK Italians, on 10 standard and 10 shallow frames, in Taylor's observation hive, 40s.—LEDGER, 14, Newstead Road, Lee, S.E. v 69

APIARY FOR SALE, twenty-four box hives complete, six skeps wintered, 180 brood combs, young queens; early May swarms booked.—KIRSTEN, Southborough, Tunbridge Wells. v 65

SIX W.B.C. shallow boxes, with drawn out frames, 2s. 6d. each; a few W.B.C. body boxes, 1s. each; shallow boxes, 9d. each; particulars, stamped envelope.—J. YOUNGER, 29, Newmarket Road, Cambridge. v 67

Editorial

BRITISH BEE-KEEPERS' ASSOCIATION.

The Council of the British Bee-Keepers' Association are anxious to obtain gifts of honey for the wounded soldiers in the London Hospital, where it is urgently needed both for food and medicinal purposes. They will, therefore, be grateful for gifts of same, no matter how small, from bee-keepers throughout the British Islands. It is unnecessary to explain our obligations to these brave fellows, who have sacrificed health and limbs for the sake of our country. Gifts should be sent addressed to the Secretary, B.B.K.A., 23, Bedford Street, Strand. The donors' names will be published in the "B.B.J." and RECORD.

W. HERROD-HEMPSALL,
Secretary.

HONEY FOR LONDON HOSPITAL.

Amount already received ... 240½ lbs.

BRITISH BEE-KEEPERS' ASSOCIATION.

ANNUAL MEETING.

(*Continued from page* 108.)

Mr. Herrod-Hempsall then proposed the alteration of rules as follows, and said: I make the proposition because I find that there are many people who imagine that because they do not send their subscription, no matter if even the secretary writes three or four times, it must be taken for granted that they do not wish to continue. We go to the expense of printing reports, and sending out to these people, who might have the courtesy to send a postcard to notify their resignation.

After a discussion it was resolved to adopt the alterations.

PRESENTATION OF THE W.B.C. GOLD MEMORIAL MEDAL.

Mr. Reid then called upon Mr. Pearman to accept the W.B.C. Gold Memorial Medal, and said: This medal has been instituted in memory of our dear friend, the late Mr. W. Broughton Carr, and I feel quite sure among all the exhibitors there is not one more deserving of success than the winner of the medal last year. It is a great proof of very high skill that he staged so many prize exhibits. I have great pleasure in presenting to you this medal, and I am sure you will prize it as a memento. (Applause.)

Mr. Pearman: Mr. Chairman, ladies and gentlemen, I have been fairly successful as an exhibitor, as most of you know, and I have won over 100 prizes, silver cups, medals, but there is none that I value more than this. First, because Mr. Carr was a gentleman whom I loved, and honoured; secondly, because it has been won in open competition. Perhaps I am a little jealous. Some of my bee-keeping friends and co-exhibitors, where I have been fairly successful, have boasted of winning gold medals, when I have not been able to do so; they have won theirs in county competitions, I have won mine in an open competition. Perhaps I might say that last year it was won with 15 points, and this with 22 points. I thank you very much.

Letters regretting inability to attend were read from a number of members.

Mr. Eales: I propose a hearty vote of thanks to the chairman, who has acted in his usual kindly and courteous manner.

This was carried with applause.

Mr. Reid: Thank you very much, ladies and gentlemen. It is a very great pleasure to come here, where I am so heartily received.

Mr. Richards: I think that we ought not to close the day without expressing to Mr. Cowan some word of welcome, or word of comfort. Those who were here at the last meeting will remember that he has been connected with this Society since 1874, at which date I for one was not connected with any society on this earth. It is extraordinary for anyone to occupy such a position for such a length of time. He has the confidence of the Society; he has made the Society what it is to-day, and we should express, what I am sure we all feel, great regret at his absence. I propose that we as an Association send him and Mrs. Cowan our best of good wishes for continued health and prosperity, with a hope that we shall see him on many future occasions.

This was carried with loud and continued applause.

Tea was served at 5.30, after which a conversazione was held, Mr. Reid again occupying the chair. Mr. W. Herrod-Hempsall gave a lecture on "Honey, from the Cell to the Consumer." A number of questions were asked and answered, and a very successful meeting was brought to a close by a hearty vote of thanks to Mr. Reid for so ably presiding.

OBITUARY NOTICE.

MR. W. H. JOHNSTON, PRESTON.

The death occurred on March 27th of Mr. Walter Henry Johnston, of Preston, officer in charge of the weights and measures department for the county. Mr. Johnston, who was 55 years of age, had been unwell for some time. He underwent an operation for an internal complaint three weeks ago. He appeared to be progressing favourably, but collapsed and died on the morning of March 27th. Mr. Johnston was well known all over Lancashire, and was an enthusiastic follower of all kinds of sport. He also held a prominent rank as a Freemason. He was well known at Preston as a bee-keeper, and his advice on matters pertaining to bee culture was often sought. He was for some years local secretary for the Preston district of the Lancs. B.K.A.

BEES ON THE KINEMA.

On Tuesday, April 4th, Mr. J. C. Bee Mason showed his cinematograph films of bees and bee-keeping at the Central Y.M.C.A. in Tottenham Court Road, London. Lady Rodney presided, and H.R.H. Princess Christian and H.H. Princess Victoria, to whom Mr. Mason was presented after the pictures and lecture, were present.

In the course of a short introductory speech Lady Rodney confessed that she knew very little about bees, but said that it was necessary to tell them all that was happening in their owner's household, and that the two most homely sounds she knew, especially at such a time as the present, were the humming of the bees in the summer, and the song of the kettle on the hearth on a winter afternoon.

We have seen Mr. Mason's pictures before, but never to greater advantage than at the Y.M.C.A. They were highly appreciated by a large audience, among whom were a considerable number of men in khaki. When it was stated on the screen that a queen is able to lay from 2,000 to 3,000 eggs per day there was a subdued "whew," and later on, when a picture of the bees rolling a dead virgin queen down the alighting board was shown, someone at the back remarked, "They are playing football with her." Each "spool" as it was shown receeived a hearty round of applause.

In connection with the Y.M.C.A. Mr. Mason has generously offered to give free tuition in bee-keeping to men in the Army on their return to civil life, and at the end of their training to present each man with a hive of bees. A pamphlet giving full particulars may be obtained by writing to the Editorial Department, Y.M.C.A., Tottenham Court Road, London, W.

We understand that Mr. Mason is going on tour with his pictures, and we would strongly advise all our readers, who have the opportunity, to go and see them.

NORTHUMBERLAND BEE-KEEPERS' ASSOCIATION.

ANNUAL MEETING.

The annual meeting of the Northumberland Bee-keepers' Association was held in the Black Bull Hotel, Morpeth, on March 25. Ald. John Wilkinson, of Ashington, presided, and others present were the Rev. J. G. Shotton (Doddington), Mr. R. W. Davidson (Bywell), Mr. H. Harmer (Sunniside), Mr. J. Embleton and Mr. E. B. Atkinson (Morpeth), Mr. Wm. Thompson (Guyzance), Mr. J. Bell (Shilbottle), Mr. W. Pattison (Alnwick), and Mr. R. Robson, hon. secretary (Wooler).

The chairman said that the season had been a disastrous one, and the loss of such a large quantity of bees had been disheartening to bee-keepers generally.

The report for the past year read as follows :—The committee regret that owing to the present crises, unfavourable season of 1915, and prevalence of the "Isle of Wight" disease, the interests of bee-keepers have been and are heavily handicapped.

Major Sitwell, our hon. secretary, is still doing duty for King and country; Mr. Thos. Gordon, hon. treasurer, has joined the forces since last annual meeting, and many other members of our association have also enlisted. We wish them all a safe return. In the Roll of Honour of the BRITISH BEE JOURNAL, Northumberland is well represented. The committee wish to express their sympathy with the vice-presidents and members who have lost loved ones during the past year in the war.

Every local secretary is ex-officio a member of the Committee of Management, and it is only by them and their co-operation with each other and the hon. secretary that the organisation of the whole county association can reach all bee-keepers.

The latter end of May and beginning of June had every appearance of being another record season. The weather conditions then changed and almost prevented any more honey being stored in the supers. The heather takes were also a failure, in some districts only was surplus obtained. A few stocks on the Cheviots had full racks, but the results on low-lying moors were poor.

We regret to report that the "Isle of Wight" disease is in almost every district throughout the county. Since the expert's tour, Glendale has been hard hit. The stocks of a good many bee-keepers have been wiped out. It is understood that the

Board of Agriculture has found a remedy, but will not publish it until a further and larger experiment has been successfully carried out. The committee have agreed to support the expenses attendant on this experiment.

The committee look forward in hope that by the end of the season peace may have come or be in sight. They also hope that those who have lost their stocks through disease will have the same hopeful spirit that animates our gallant defenders, and by patience, common-sense, and the sacrifice of a season, if needs be, will look forward to better things in the bee-world. They also hope that all old members will continue their membership and endeavour to extend the usefulness of the association.

The financial statement showed an income of £44 10s. 10d. and an expenditure of £31 3s. 7d., leaving a balance of £13 7s. 3d.

A lengthy discussion took place on the question of the "Isle of Wight" disease. Mr. Embleton thought it would be a good idea if leaflets were distributed among the members telling them the first symptoms of the disease and the best way to get rid of it. He had only three members in his district who had bees, and in all probability they would go this spring.

Mr. Harmer remarked that the Local Government Board had issued leaflets with regard to this disease and other diseases showing what should be done.

Mr. Embleton: I have seen them, and I don't think there is much to gather from them.

Mr. Harmer: There is a good deal to gather from them if you read them up.

The chairman said that there was a serious problem before bee-keepers in the county. They had members who had no bees at all. Was it not possible to get swarms of bees from another county, and the association to keep them in a certain place for a time where there was no disease?

Mr. Embleton: But the bee-keepers will be away from them, and it is their hobby.

Chairman: Only until after the honey season.

Mr. Embleton thought that to eradicate the disease every bee would have to be stamped out in the districts affected.

The Rev. J. G. Shotton said his idea was to approach the landlords and tenant farmers of Glendale and get them to state that they would not allow a single hive upon their moors unless it had the authorisation of that association. He believed if that had been done during the last three years they would have been clear of the "Isle of Wight" disease. If they did that now he thought they would have some chance of stopping it.

Mr. Davidson thought they should do it throughout the county. It would be worth their while to compensate bee-keepers for the loss of the hive.

Chairman: What we want to do is to stamp out the disease first and then adopt your plan. Some may say that their hive was clear of disease.

Rev. J. G. Shotton: It is a hard thing that people should take their bees on to the moor with disease on them.

Mr. Embleton moved that leaflets be issued to the members telling them what were the symptoms of the disease and how to get rid of it.

Mr. Atkinson seconded the motion, which was carried, and the matter was left in the hands of the committee to issue the instructions to the members.

After further discussion it was unanimously decided, on the motion of the Rev. J. G. Shotton, that the landlords and tenants of the heather districts be approached asking them to allow only persons to take bees to the heather which were certified by the association to be immune from "Isle of Wight" disease.

The chairman asked what were the first symptoms of the disease.

Mr. Harmer: If we could find that out we could have a cure.

On the motion of the Rev. J. G. Shotton, a hearty vote of thanks was accorded to Mr. Robt. Robson for the diligent way in which he had carried out his duties of secretary and treasurer.

The election of officials resulted as follows:—Mr. A. B. Collingwood was re-elected president; Colonel Roddam, chairman; Major F. Sitwell and Mr. Robt. Robson, hon. secretaries; Mr. T. Gordon, treasurer; Mr. J. J. K. Suddes, auditor. The following were appointed to act as a committee:—Mr. R. W. Davidson (Bywell Castle), Rev. J. G. Shotton (Doddington), Mr. N. Beveridge (Ewart), Mr. W. Colville (Chatton), Mr. P. C. Swan (Ewart Newtown), Messrs. R. Robson (Riding Mill), J. Scott, W. Smart, and Thos. Bruce (Wooler), E. B. Atkinson and R. Matheson (Morpeth), and J. Wilkinson (Ashington).

Mr. J. Embleton, Morpeth, is the local secretary for the association.

Mr. Davidson said that as Mr. Robson had taken over the duties of Major Sitwell and Mr. Gordon, both of whom were on active service, he thought that the association should grant an honorarium to their secretary.

It was agreed that this matter be left in the hands of the committee.

Messrs. W. J. Sanderson, jun. (Warkworth) and Mr. G. G. Butler (Ewart Park) were elected as representatives on the Council of the British Bee-keepers' Association.—*Communicated.*

QUEEN REARING AND INTRODUCTION.

(*Continued from page* 104.)

On Page 117 is illustrated the following methods: A very simple nucleus hive, holding four frames, is shown at No. 1. This is easily constructed, and should have a small lift shown reared at the side to hold the quilts neatly and also accommodate a feeder if necessary. The queen-rearing ground of these nucleus hives in our apiary at Luton is shown at No. 2.

If so desired, double nucleus hives can be made as No. 3, in which a division board is fitted lightly in the centre, so that three frames can be accommodated on either side. The entrances should be cut at opposite corners, as shown, so that the queen when returning from her wedding flight enters the compartment from which she issued. The advantage of this hive is that greater warmth is obtained, so that fewer bees are required in each compartment. At the same time, careful manipulation is necessary, or the bees will get together and fight. To avoid this the calico quilt should be tacked tightly right along the top of the division board, as illustrated at No. 4, so that only one side is uncovered at once.

Another method is to adapt a Wells hive, which is useless for any other purpose, in which six three-frame nuclei are housed together. No. 5 shows how this is done. The division boards are made to stand up one inch above the runner, so that each is self-contained, so far as quilts are concerned, which prevents the bees travelling from one compartment to the other. An entrance is cut at either end, two at the front, as in No. 6, and two at the back, as in No. 5, to keep them as far apart as possible. This hive is also very useful to keep spare queens right through the winter. There is sufficient warmth and the food supply is kept up by means of candy. I have kept hundreds of queens thus until the spring in the hive illustrated.

A nucleus hive is stocked by taking one comb of sealed brood and two of food from a strong stock in the middle of a good working day, so that, as the old bees are out, mostly young bees—that, not having flown, will locate and return to the new position and also live longer—of which about a quart should be taken, are obtained.

The queen must be found and left in the parent stock. The brood comb is placed in between the food combs, covered with quilts, and the hive placed on a new stand. A virgin queen is introduced or a queen cell given. It will also be advisable to feed the bees for a time, then, and also at any subsequent period of bad weather.

Mr. Sladen uses a three-compartment hive, as Fig. 59, in which a neat arrangement for feeding is made in the double wall at the back. He says: "The feeder consists of a deep tin vessel, divided into three compartments by wooden strips, B B. Fig. 60. The feeder is filled through a hole in the back of the hive by means of a funnel, and the syrup flows through a wire cloth nailed on to the bottoms of the wooden divisions. The hole is closed by means of a cork. Each nucleus communicates with the compartment in the feeder opposite to it through an opening in the inner wall of the brood chamber near the top, covered with excluder zinc and clearly seen in Fig. 59. A wooden fence made of thin slats nailed in cleats is placed in each feeder for the bees to crawl upon when they get in to take the syrup. The advantage of this feeder is that the three nuclei are fed at one filling without the necessity of opening the hive."

To prevent the queen cells being torn down when introduced, Mr. Sladen uses the cage illustrated at Fig. 61, which is formed by a U-shaped piece of wire cloth nailed on to a small block of wood in which there is a feed hole. Over this works

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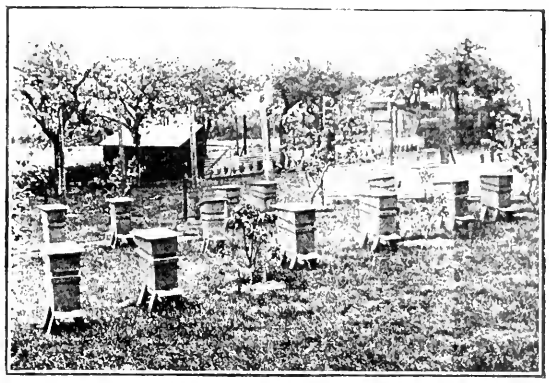

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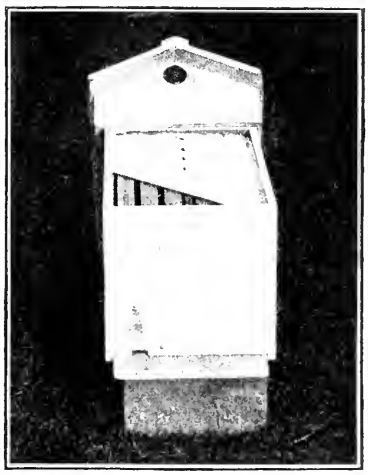

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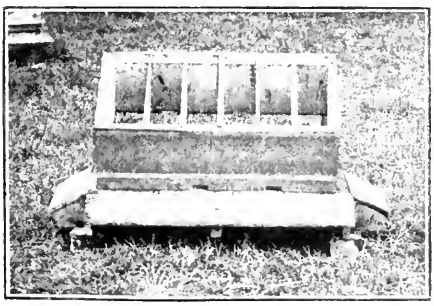

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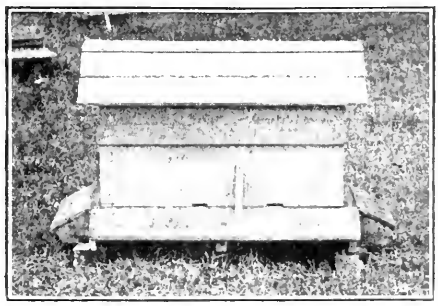

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a piece of celluloid or tin, as at c, with a square wire clip to fasten it when in position as at closed. A piece of wire with a T top soldered on to the wire cloth allows the cage to be hung between the combs. The cell is seen in posi-

tion with the cage open in the centre and closed on the left hand side. This cage can also be used for introducing queens. The one disadvantage of these nucleus hives is that full combs of brood and a fair quantity of bees have to be

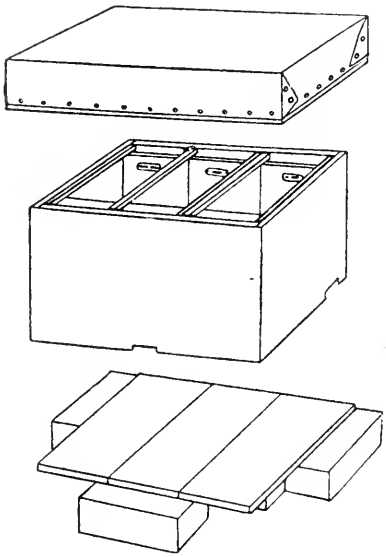

FIG. 59.

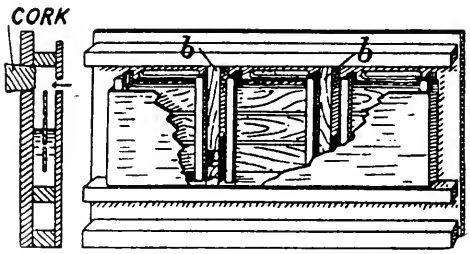

FIG. 60.

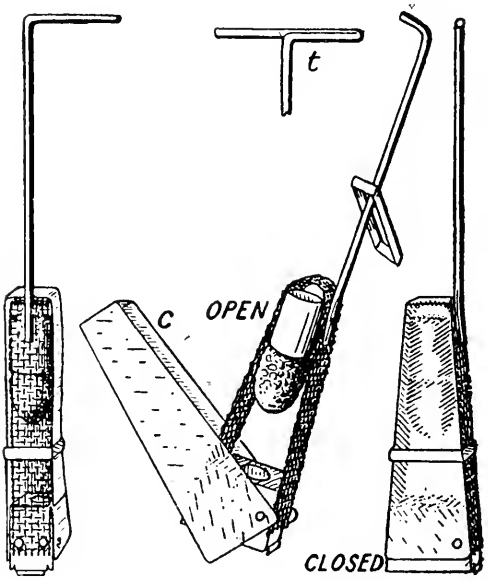

FIG. 61.

taken, to the disadvantage of the stock from which they have been removed; therefore, where a large number of queens are reared, one of the following methods is generally adopted.

(To be Continued.)

WEATHER REPORT.

WESTBOURNE, SUSSEX.

MARCH, 1916.

Rainfall, 3.52in.
Above aver., 1.28in.
Heaviest fall, .90, on 27th.
Rain fell on 22 days.
Sunshine, 91.2 hrs.
Below aver., 50 hrs.
Brightest day, 26th, 9.6 hrs.
Sunless days, 10.
Maximum temperature, 55 on 19th.
Minimum temperature, 26 on 25th.
Minimum on grass, 20 on 5th, 25th, and 29th.
Frosty nights, 12.
Mean maximum, 44.4.
Mean minimum, 34.7.
Mean temperature, 39.5.
Below average, 2.0.
Maximum barometer, 30.438, on 31st.
Minimum barometer, 29.815, on 28th.

L. B. BIRKETT.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

COMB FOUNDATION AND DISEASE.

[9255] Will you allow me space for a note on Mr. J. Pearman's letter (9233). In the concluding paragraph he states a friend of his rendered 1 cwt. of wax from the old combs of his defunct bees, and sold the wax to be made into foundation. If the wax was rendered from the combs in the usual way I cannot see how the germs or spores can possibly pass the ordeal and retain life or germinative power. I say above "in the usual way" of rendering wax. I will give my way—make a bag of strainer cloth according to the size of your copper or boiler, put your combs into the bag, place in your copper and fill it with water within an inch of the brim. When it boils place a frame of strips of wood on top of the bag of combs to keep it well under the boiling water; a rod of wood from the ceiling to the frame of wood that keeps the bag under will answer admirably. Then let the copper boil twenty minutes to half an hour, leave same till the next morning, when the cake of wax can be removed, the dross from the wax in the bag can be strained and mixed with coal dust for the next boiling, results of the cooking will be 3lb. to 4lb. of wax, and two lots will make a cake of wax. This wax is then put in a large saucepan with plenty of water and boiled for another twenty or twenty-five minutes, then strained into a large pot and covered down to cool; then remove any dross off the bottom of the cakes, when it is ready for market. There is no occasion for having it made into foundation. I have sold some of mine to a chemist at 1s. 9d. per lb. this winter, but when this wax gets into the hands of the maker of foundation it has to go through a process of long-continued heat which eliminates all impurities. Then the wax from the solar extractor is exposed to the rays of direct sunshine for a long time, and we are taught that sunlight is our greatest germicide, so that under these conditions I fail to see any risk of infection from foundation thus made; and in the present stress with admonitions every day "not to waste" and from the beekeeper's point of view after he has gone through his hives and finds 75 to nearly 100 per cent. of his stocks gone under (again our friend says burn the lot) possibly a careful beekeeper will secure many pounds of useful honey by carefully selecting the best parts of the combs, placing this into a honey tin or ripener, and warming the honey by standing it in the copper of water and bringing same nearly to a boil, then when liquefied pour off the honey, or, if you have a tap to your tin let the lot get nearly cold and strain through muslin from the tap. The darker part of the honey and the soaking of the combs after cutting all the dead brood and other dirty parts out of the combs, will make mead, with the addition of a little ginger, ½oz. to the gallon, suitable for summer drink. The wax rendered as above will provide means where with the beekeeper may make a new start in beekeeping when swarming time comes in May.—W. Woodley, Beedon, Newbury.

FROM DESPAIR TO COMPLETE SUCCESS.

[9256] "How are the bees?" It is a question often asked me, as many people well remember the autumn and winter of 1914-1915, when even strangers to beekeeping noticed the bees about here dying in their thousands on the ground, and when hives were opened it was only to find all the bees dead. The one or two remaining weak stocks I have tackled with success, as the following will show. Summer, autumn and winter are all but past and not a single lot have I lost. I might add I have no original queens alive now, only *daughters of queens* from stocks that had "Isle of Wight" disease. Some original combs, from stocks that were affected, are still in use, and all the same appliances. I am speaking, not of my own stocks only, but of others as well, as I now look after other stocks besides my own. On the 28th of February last, after the rough weather lately experienced, the sun being warm brought out the bees like swarming time, and the snow still lay in deep patches around, the bees alighting thereon and flying away—*snow, mind you!* At first I thought that an immense lot would be lost, but there were only a very few. I was gratified to find that, for, in my opinion, bees affected with "Isle of Wight" disease would not come off so

lucky, and it proves the good vitality of the stocks.

Now, with a wave of the hand, persons say there is no cure, and some try remedies with a pinch of salt, and any experiments are generally looked upon as simply to mean £ s. d.; that shows the apathy that is going about. I am sorry that I have not the time and opportunity like others. I think, however, that I could do a little good; anyway, I could not do worse than some. I do not claim miracles, although most are waiting for one. My method is as soon as the bees make a little progress I give a new young queen that is mated with an entirely different stock; I sprinkle the stocks well and often, and medicate freely all food, using no vinegar or salt, and, just now, I give pea flour over the candy. My only regret is that I have no "Isle of Wight" to experiment on at present, as the only drawback of my remedy is the expense of materials, especially now. I should like to find a cheaper way. Some queens are more resistant than others though by accident, the queens in the nursery having had the proper elements in the food that gives the necessary vigour, and also, perhaps, mated from an entirely different relation, so the young offspring have a good start. People often say, "Now I have got some bees we will have some honey, with the result they lose their money. After all there is a limit to a person's pocket and patience. I have as many stocks as I have time to manage; also I can make more of my bees than troubling about saving others. While so-called experts are losing their bees, your humble servant is pleased to say he knows the way *not to lose his*. What I have done others can do when they choose. I have now only to prevent "Isle of Wight," as my success (time has proved), I believe, is a cure.—ARTHUR TROWSE, 51, Eade Road, Norwich.

EXPERIENCES WITH "ISLE OF WIGHT" DISEASE.

[9257] As the subject of "Isle of Wight" disease still engages the minds of so many bee-keepers, I think I must write you again, and tell you of my experiences. I am writing these lines between calls on the telephone, of which I am in charge, as I am on military duty. I have a flickering candle for light, mother earth for a chair, and a dixie (camp kettle) for a table.

I had two stocks of Taylor's hybrid bees standing close together, one of which showed signs of "Isle of Wight" disease in early autumn, so I started to dose them with "Izal," but the weather was very wet and cold. This lot all succumbed. Soon after, the other hive began to show signs of disease, so as the weather was a bit milder I sprayed all these with Izal, scrubbed the hive out, and fed up rapidly with Izalised syrup, and did all I could think of to check the disease. The bees decreased in numbers till only about three combs were covered, and no brood to be seen. I was just about disheartened, when I noticed a very slight improvement. The weather suddenly cleared up, and the bees began to take in pollen. On opening the hive a little later I found a small patch of sealed brood on one comb, so I put in warm syrup strongly dosed with Izal. This was just a month ago. Now there are no signs of disease, the brood nest is increasing slowly, on account of there being so few bees in the hive. There is even some honey being stored. I feel hopeful now, and pin my faith on Izal, which I think will prove to be THE cure for "Isle of Wight" disease.

The pear and apple trees are just beginning to bloom here in Jersey, and the last week or so the weather has been really hot. The cliffs are all covered with gorse and broom in full bloom, and only a fortnight ago we were having a heavy fall of snow, an almost unheard of thing in "Sunny Jersey."

One or two curious things in connection with bees came under my notice in a friend's apiary last autumn.

Being short of tin separators for his section racks, my friend cut several out of cardboard and placed in the hives, but the bees industriously removed all the cardboard, and strewed the ground round their hives with the débris.

Then, again, a large dish of comb cappings was put in a garden frame, which was bee proof. The bees found a corner where the glass was slightly chipped, worked out a lot of putty, and made a hole just large enough for a bee to get through, then a constant stream of bees were busy till every atom of honey was taken into the hives again.

This friend, alas! had a stroke and died suddenly among his bee hives last January.

I am enclosing two photos I took the other day of my hives and garden, but I don't think they are clear enough for publication. I must have another try when home on my next leave.—F. N. COLEBROOK.

[We are sorry the prints sent were too "foggy" for reproduction.—EDS.]

DESTROYING QUEEN WASPS.

[9258] I thought the following might be interesting to your readers.

I have bought about 150 large glass crates from the G.C.R. Co., lying at the extreme end of the Grimsby Docks. The crates are what those large squares of glass come in,

some of them 12 to 15 ft. square and 6 in. deep. I am taking these to pieces, and finding hundreds of queen wasps in them, 18 or 20 in one case. I have only got half the cases taken to pieces, and already have killed hundreds, and have hundreds more in a box, all alive. They do look so quaint in the box, more or less in rows, with the wings all folded neatly under the body with their legs. I took 20 or 30 in my office for a day, and they were soon alive and crawling about. I put them back in the cold place where I had the others, and they have all gone dormant again with wings under their body. The most extraordinary thing to me is, the nearest point of land where there could be any nests last year is 2 to 2½ miles from the crates. I might say they have been lying there since the beginning of the war.—D. Seamer, Grimsby.

[On warm days queen wasps will now be looking for suitable places for establishing their nests, and to prevent as far as possible a repetition of the plague of wasps we suffered from last year, bee-keepers will do well to kill as many queens as possible. The plan adopted by the Peterboro' B.K.A. reported below might be carried out by other associations, or even individual bee-keepers with advantage.—Eds.]

DESTROYING WASPS.

Prizes are being offered by the Soke of Peterborough Bee-keepers' Association for the largest number of queen wasps killed within a radius of 9 miles of Peterborough before May 28th next as one of the means for checking the spread of the bee disease which is destroying so many stocks of bees in the district.

THE HUMOROUS SIDE OF BEE-KEEPING.

Most bee-keepers will have heard the story told of the young lady from London who was on a visit to her country cousins, and who, on helping herself to honey at the table, remarked, "I notice you keep a bee." However much or little of truth there may be in the above, the writer can vouch for the following stories:—

A bee-keeper who is also a chemist in the North of England exhibited an observatory hive in his shop-window. The hive had not been in position long when a scavenger saw it and called to his mate, "Hi! Bill! Come and look at F——'s new fly-trap!"

On another occasion a boy of about ten summers came into the shop with a quart glass bottle and said, "See, Mr. F——, I have brought you some of your bees. They were on the flowers in our garden!" And, sure enough, there were from a score to thirty workers buzzing round the interior of the bottle.

It appeared that the boy had waited for a bee to settle on a flower, and then had placed the bottle-neck over it, and so had obtained his prisoners.

Needless to say the lad was told that the bees knew their way home as well as he, and they were there and then liberated by wrapping the bottle in a duster and laying it on the door-mat, when the bees found their way out of their transparent prison. And after a circle round each one made off in the direction of the hives. —Lancastrian.

TRADE CATALOGUES RECEIVED.

E. J. Burtt, Stroud Road, Gloucester. We have received the usual neat, well-got-up catalogue from Mr. Burtt. He has, wisely we think, used a good quality paper on which the numerous illustrations and the printing show up very clearly. Prices are, of course, a little in advance of last year, but in all the catalogues from the various manufacturers we have been struck with the very moderate advances in price taking present conditions into consideration. There are several novelties listed, and page 3 is devoted to advice for beginners. The catalogue contains a well chosen list of appliances, and will be sent post free on application.

The Dollis Park Poultry Farm, Church End, Finchley, London, N.

This farm is being run on up-to-date and modern lines. The idea of the proprietor is to supply nothing but the best. A personal visit gave us great pleasure, as we knew a little about poultry, as well as bees, having given instruction on this subject for the past fifteen years.

The following breeds are kept:—White Wyandottes, Buff and White Orpingtons, Rhode Island Reds, Salmon Faverolles, White and Black Leghorns, and when we say that the stock comprises such strains as Lord Rothschild, Barron, Collinson, Solomon, Marchioness of Londonderry, our readers will understand that purchasers get the best blood in the country. Sittings of eggs, table poultry, day- and week-old chicks, are a speciality.

The catalogue is the best we have seen, and is a work of art, the illustrations being by kinematograph, some being coloured.

It can be obtained free upon application, but we would suggest in fairness to the proprietor that only those really wishing to purchase apply for it, as it must have cost an enormous sum to produce.

Will our correspondents please see that all postage is fully prepaid? We cheerfully give advice free, but we cannot afford to pay 2d. or more on underpaid letters as well, and for the future letters, or parcels, that are not sufficiently prepaid will be refused. Inland letter rates are: Not exceeding 1oz. in weight, 1d.; exceeding 1oz., but not exceeding 2oz. in weight, 2d.; for every additional 2oz. (or fraction of 2oz.), ½d.

Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. All questions must be accompanied by the sender's name and address, not necessarily for publication, but as a guarantee of good faith. There is no fee for answering questions.

NOVICE (Kent).—(1) At least 4 miles; probably more. (2) The same difference there is between an egg and a chicken. The eggs of the bee hatch into small grubs, or larvæ, in three days. (3) Eggs.

Suspected Disease.

BETA (Hull), CHESHAM (Bucks), E. R. BOYEN (Suffolk).—It is "Isle of Wight" disease.

P. J. NORTH (Cambs).—The bees were too dry for diagnosis. The probable cause of death was "Isle of Wight" disease. Do not use the combs for other stocks.

C. TRUSCOTT (Sheerness).—The bees were too dry for diagnosis. We should say the cause of death was starvation. The substance found is mainly excreta of the small wax moth larvæ.

H. J. EASTWOOD (Hants).—"Isle of Wight" disease. Burn the dead bees, combs, frames, and quilts, and disinfect the hives by scorching with a painter's blow lamp. Sprinkle the ground round *all* the hives with quick lime, and, if possible, dig it over.

Spray the alighting boards of hives with a solution of 1 teaspoonful of Izal to a pint of water, two or three times a week; or use one of the other advertised remedies. See that the bees have a constant supply of clean water.

E. M. PENROSE (Dorchester).—The queen was not affected with "Isle of Wight" disease. Possibly there is another queen in the hive who has disposed of a rival.

Special Prepaid Advertisements

Two Words One Penny, minimum Sixpence.

Will advertisers please read these Rules carefully in order to save trouble, as they will in future be strictly adhered to.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not permissible at above rate, but will be inserted at* 1d. *per word as* **"Business"** *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of* 3s. *per* ½*in., or* 5s. *per inch.*

PRIVATE ADVERTISEMENTS are only intended for readers having **Surplus Stock to** *dispose of.* **Driven bees, Nuclei,** *and* **Queens that are reared or imported for sale,** are *Trade Advertisements, and can only be accepted under trade terms.*

Advertisements must reach us NOT LATER than FIRST POST on TUESDAY MORNING for insertion in the "Journal" the same week.

Orders for three or more consecutive insertions in "The Bee Journal" entitle advertisers to one insertion in "The Bee-Keepers' Record" free of charge.

PRIVATE ADVERTISEMENTS.

SHALLOW frame racks, with drawn out comb, complete, 5s. 6d. each, guaranteed free from disease.—DOLLIS PARK POULTRY FARM, Church End, Finchley, N.

STRONG STOCKS FOR SALE, no disease, 26s.; orders for swarms booked now.—FREDA, Lutton Rectory, Oundle. v 82

THREE Box Hives, bars and crates, ditto universal, £1; at home. Straw skeps, 1s.—J. LEDGER, Sandhurst, Berks. v 88

FOR SALE, several stocks of English Blacks, established on standard frames, healthy and in good condition, price 22s. per stock of eight frames, travelling box 5s., returnable, or in good standard hives, 32s. per stock.—H. TURNBULL, 71, Commercial-street, Norton, Malton. v 86

BEES FOR SALE, eight strong healthy stocks, in standard hives, each stock on ten frames, wired; 1915 queens; section racks, honey extractor.—HOBBS, Camlot, Barnet. v 84

THREE stocks in hives, 30s. each; all young queens, raised from Simmins' White Star strain.—HARVEY, "Kilmaurs," Asheldon-road, Torquay. v 83

FOUR dozen new standard frames, with wedges, 1s. 1d. per dozen; 6lbs. new British weed foundation, 10 sheets to lb., 2s. 1d. per lb.; 20lbs. light colonred beeswax, 1s. 6d. per lb.; sample, 3d.; 1 gross metal ends, 1s.—J. YOUNGER, 29, Newmarket-road, Cambridge. v 81

EXPERT would undertake Spring Tour; experienced.—"EXPERT," "B.B.J." Office, 23, Bedford-street, Strand, London, W.C. v 49

WE have for sale a number of blocks of illustrations of readers' apiaries, &c., that have been used in THE BRITISH BEE JOURNAL and THE BEE RECORD; price 3s. each, post free; this is half cost price.—MANAGER, "BEE JOURNAL" Office, 23, Bedford Street, Strand, London, W.C.

OWNER enlisted.—Will someone with thorough knowledge of work take charge of twenty stock apiary on fruit farm in Worcestershire; salary by arrangement.—Box S., "BRITISH BEE JOURNAL" Office 23, Bedford-street, Strand, W.C. v 57

BRITISH BEE-KEEPERS' ASSOCIATION.

The Council of the British Bee-Keepers' Association are anxious to obtain gifts of honey for the wounded soldiers in the London Hospital, where it is urgently needed both for food and medicinal purposes. They will, therefore, be grateful for gifts of same, no matter how small, from bee-keepers throughout the British Islands. It is unnecessary to explain our obligations to these brave fellows, who have sacrificed health and limbs for the sake of our country. Gifts should be sent addressed to the Secretary, B.B.K.A., 23, Bedford Street, Strand. The donors' names will be published in the "B.B.J." and RECORD.

W. HERROD-HEMPSALL,
Secretary.

HONEY FOR LONDON HOSPITAL.

Amount already received ... 240½ lbs.

ERRATUM.

In our report last week of the presentation of the W.B.C. gold medal at the B.B.K.A. annual meeting, Mr. Pearman, the winner, said he had won over 500 prizes—not 100 as reported.

WITH THE BEES AT THE FRONT.

By ex-Sergt. A. G. Atwell.

(*Continued from page* 71.)

Monsieur Emile Crinquette was the name of the old French bee-keeper whom I promised to talk about in my last instalment. I billeted at his farm for about six weeks, as it took us a considerable time to re-organise after the hard fighting we had just been through. I regret that I was unable to obtain any photos of the old farmer, his bees, or his partly wrecked house, as they would have proved most interesting. However, we were not allowed cameras, and there were no local photographers, and so I shall have to depict the scene, as well as I can, in words alone. Mons. Crinquette was a big, burly man of some 60 years; he lived with his wife and little niece in the quaint old village of Guttersteine, Northern France, not very many miles from the Belgian frontier. He had a good-sized farm, keeping a servant girl and three or four farm hands. It was a farm of the usual type, a dozen cows, pigs, chickens, etc., with several good-sized fields adjoining, some under the plough and some used for grazing and fruit growing. Quite close to the farmhouse, in the kitchen garden which adjoined it, were the old man's bees. A nice little spot, the apiary being sheltered by a good thick hedge; in front and around it grew various herbs, thyme, sage, etc., and, although it was in December when I saw it, I could guess what an ideal spot it was for the bees, and how pretty it would look in the summer time. Furthermore, the big, old-fashioned kitchen windows overlooked the apiary, so that it could always be watched at swarming time, and thus very few swarms were lost. The bees were chiefly in skeps, and were sheltered under a long bee-house, the floor of which was not much higher than the ground, the roof being tiled, and the three sides thatched with straw. Some half-dozen or more skeps were always wintered here, meaning, of course, a goodly number in the summer, when the bee-house would become over-crowded, and the old bee-keeper would gradually extend the row of skeps from it in a straight line, under the shelter of the hedge, right down the garden. I think the old man was only a skeppist because, with so much other work to do, he had not sufficient time to give to frame hives, as he had one frame hive of the outdoor observation type, and he told me how he used to study his bees in this, through the window at the back of the hive, when he had a few moments to spare. Things used to go on quietly year after year in the same way, until the war broke out. Then the Germans came; they must have been chiefly cavalry patrols, as I think the infantry hardly reached so far as this village, not in great numbers, at any rate. However, whatever they were, they soon made short work of all the old man's stores. Everything in the way of wine, or beer, was quickly taken, after which they helped themselves to such things as eggs, butter, honey, etc., all these things being stored in large quantities by the farmers, to tide over the winter. Still, the old bee-keeper and his wife, refused to leave their farm, but they had to sit and see all their goods taken, and, I am glad to say, the behaviour of the looters towards them was better than

it usually is, although, of course, they daren't say a word on behalf of their property. The worst was yet to come, for a day or two after a German shrapnel shell caught the farm, blowing off the kitchen roof, smashing all the windows; many of the bullets and pieces of shell passed through the kitchen, embedding themselves deeply in the opposite walls. A few spare pieces also caught the apiary, the frame hive in particular, but not sufficiently to harm the bees. Fortunately there was no one in the kitchen at the time, or they must certainly have been injured. Mons. Crinquette's coat, which was hanging on one of the doors, was absolutely riddled with bullet holes, and, as it is quite impossible for him to wear it again, he is keeping it as a souvenir—he was very thankful he wasn't in it when the shell came. I had several talks to this old bee-keeper during the time I stayed at his farm, also to several others in the same village, the majority of whom kept their bees in skeps and bee-houses. Being the winter time, of course it was not possible to examine the bees in any way, but, as far as I could gather, there was very little disease about. The old man was sorry when we had to go away, and, after embracing me, kissed me on both cheeks at parting.

(To be continued.)

CUMBERLAND AND WESTMORLAND BEE-KEEPERS' ASSOCIATION.

ANNUAL MEETING.

The annual meeting of the Cumberland and Westmorland Bee-keepers' Association was held in the Oddfellows' meeting room, Stricklandgate, Kendal, on Saturday, March 11. The attendance was not large, especially considering that the Association has at least 50 subscribers in and around Kendal alone. Dr. Allen, of Ambleside (a vice-president) took the chair, and among others present were the Rev. R. W. Harris, of Long Marton, Mr. Geo. Chatham, hon. local secretary, and Mr. John Steel, of Carlisle, hon. secretary and treasurer. In the executive committee's report for 1915, read by Mr. Steel, it was stated that the bee season was a very disappointing one. The clover-yield, except in a few districts, was very poor, and in both counties the heather crop was a complete failure. The Association had nevertheless rendered much useful service, and the timely assistance of the three experts had in many cases preserved stocks from starvation, though it was feared that during the winter numerous stocks must have been lost through the usual second visit of the experts being impossible owing to lack of funds. The autumn examination proved that many stocks, as is usual in cold and wet seasons, were very weak and an easy prey not only to their stronger neighbours but also to the wasps, which appeared in such numbers as to be a thorough pest; and at the door of the wasps may be laid the charge of much spread of disease. The membership list had become reduced owing to the striking off of all names where the subscriptions had not been paid for three years or more, a course which had been rendered unavoidable by the reduction of the County Council grants and the consequent necessity of confining the visits of the experts to the active members of the Association. Up to 1908 the Cumberland County Council's annual grant was £150, and non-members were visited just the same as members, double visits being the rule rather than the exception, but the reduction of the grant to £100 greatly reduced the amount of attention paid to stocks of non-members, and the present allowance of £50 had restricted the operations of the Association to the limits of its effective membership. The Westmorland Education Committee grants £25. Sixty-two new members had been enrolled during the year. The visiting was done by the experts under varying weather conditions. Mr. Price and Mr. Bouch were obliged to break their tours on account of health, but the journeys were afterwards resumed, and with two exceptions all districts were eventually visited. In the autumn a number of second visits were paid to members in districts where fresh outbreaks of "Isle of Wight" disease were suspected.

The balance-sheet showed the Association to be sound financially, although the amount in hand was only £1 1s. 8d. The obligations of the Association, however, could only be entirely fulfilled with an income of at least £200 per annum. The County Council grants had been reduced by £50 per annum, and members' subscriptions were also £16 less than last year; a number of members retired after losing their bees through disease, and others reduced their subscriptions owing to the war. It was essential that the subscription list should exceed £100 per annum if the high standard of visiting of recent years was to be maintained.

The "Isle of Wight" disease was still very prevalent, and had worked its way into many districts which were previously clear. Up to the present no instructions for its treatment could be made public

other than what was given in the Board of Agriculture leaflet No. 253, but there was hope of something more being reported by the end of the year. The secretary had had a deal of correspondence with the Board of Agriculture during the past ten months with a view to finding a remedy, and had learned that the Board had discovered what is believed to be a cure for the "Isle of Wight" disease. The treatment had proved effective in a small test, but the confirmation of a more extensive experiment was desired before issuing details to the public. Arrangements for holding this experiment in Cumberland were at present under the joint consideration of the Board of Agriculture, the British Bee-keepers' Association, and the C. and W.B.K.A. Mr. Steel afterwards explained that he was in hopes of securing the financial co-operation of the British Bee-keeper's Association and the provincial associations with a view to having the experiments carried out; the probable cost would be £50.

Referring to the accounts, Mr. Steel said that the expenses for the year were £106, as compared with £136 in 1914. The stated balance of £1 1s. 8d. was now improved; the Countess of Carlisle had sent him £3 and a lady at Keswick half-a-guinea. The report and accounts were approved on the motion of the Rev. R. W. Harris, seconded by Mr. G. Chatham. On the motion of Mr. Chatham, seconded by Mr. G. Millward, it was resolved that owners of more than five hives should pay the full subscription of 5s. instead of the cottagers' subscription of 2s. 6d. It was stated that there were now almost as many hives in Westmorland as in Cumberland, where a large number of stocks had been lost owing to the "Isle of Wight" disease.

Rosalind, Countess of Carlisle, was re-elected president. The vice-presidents, among whom are the Bishop of Carlisle, the Earl of Lonsdale, and Sir Benjamin Scott, were re-elected, with the exception of the late Mr. A. Mitchell-Dawson and Mr. Jones-Balme (retired). Others elected were Mr. Oswald Hedley, Mr. F. W. Crewdson, and Capt. W. D. Crewdson. The Rev. R. W. Harris moved the re-election of Mr. Steel as hon. secretary, which was adopted with applause.

The Chairman said the Association had been fortunate in securing such a capable and active successor to Mr. G. W. Avery as Mr. Steel had proved himself to be.

Mr. Steel, in returning thanks, said he wished to get the local hon. secretaries on a better footing, and to get more service from them. Some of them had been secretaries only in name. If each would work his district properly, he could get to know of local grievances against the Association or against any of its officials, and report the same to the hon. secretary.

Mr. Joseph Price and Mr. J. Steel were re-elected representatives to the British Bee-keepers' Association. The executive committee was re-elected *en bloc*. Penrith was decided on as the place of next year's meeting.

The meeting next discussed the "Isle of Wight" disease. Dr. Allen said that Ambleside was a hotbed of the disease; he feared there was not a bee existing within five miles of Ambleside, and as far as he was able to trace, the disease was spreading southwards. It had also prevailed in and around Ennerdale. Strangely, however, it did not appear to be known about Kendal. Mr. Chatham said that the nearest places to Kendal where it prevailed were Milnthorpe and Carnforth. He counselled bee-keepers not to buy bees from anywhere outside their own district, but to trust to increasing their stocks by natural reproduction.

Mr. Steel then gave an outline of the correspondence which had passed between him and the Board of Agriculture. The Board preferred not to make public the remedy for the disease; it was in the form of drugs, and if the public got hold of it, it might be used in improper proportions. On the motion of the Chairman it was agreed that the secretary should be authorised to carry out, when completed, the arrangements for the experiments, and that the Association should subscribe so much towards the cost. In view of this decision, the meeting did not consider a suggestion which had come from Mr. Frank E. Marshall, of Keswick, by which it was proposed to clear an infected district of bees and of all suspicious appliances, to keep it "beeless" for a fixed period, and then to re-stock it with healthy bees. It was pointed out, too, that the Association would have no power to enforce the clearance of any area.—*Communicated.*

LEICESTERSHIRE AND RUTLAND BEE-KEEPERS' ASSOCIATION.

ANNUAL MEETING.

The annual meeting of the above Association was held at the Vaughan Working Men's College on Saturday, April 8.

Mr. H. M. Riley presided, and among others present were Messrs. Meadows, Bedingfield, Marriott, Tallent, Hunt, Payne, Jesson, Moss, Hackett, Spencer, and the Rev. J. F. Anderson.

The thirty-fourth report and balance-

sheet, which was adopted, stated that owing to the great upheaval and disorganisation throughout the country caused by the war, the usual routine work of the Association had not been fully carried out, and two rather important events, the Abbey Park Show and the Autumnal Conference, were not held last year. One of the benefits resulting from the war would be a great impetus to all branches of agriculture, and especially the minor ones, which had hitherto been neglected. The inquiries made by the Board of Agriculture with regard to the amount of honey produced and available in the country, indicated that the industry, by its recognition by the Government, was gradually assuming the importance due to it, and that there was a great future before bee-keeping when normal conditions again prevail.

The year commenced with 323 members, 42 others being enrolled. Of those 315 had paid their annual subscriptions. The slight decrease in the membership was entirely accounted for by the loss of stocks through disease. Those circumstances called for all the help that members could give, and it was particularly hoped that at this critical time members who lose their bees would not on that account weaken the Association by withdrawing their subscriptions. The importance of inducing all keepers of bees to become members of the Society could not be too strongly advocated, so that they might receive expert advice and instruction, thereby greatly preventing the spread of bee diseases.

The Council were pleased to report that the financial position of the Association was sound, there being an increased balance in hand. The Council very much regretted that they had to report the extension of the dreaded bee-pest known as the "Isle of Wight" disease.

The Council deeply regretted having to record the death of Mrs. Perry-Herrick, who had been a member of the Association for a number of years; of Colonel the Hon. Evans-Freke, Bisbrook Hall, who was killed whilst fighting for his King and country; also Mr. J. G. Colton, of Nanpantan, and Mrs. A. Martin, of Egleton (Miss A. Throsby, Leicester), both of whom were for many years members of the Council, and keen supporters of the Association. The Council could not think without regret of the passing away of Mr. Richard Brown, of Somersham, Hunts, after a long and painful illness, patiently and courageously borne.

The accounts showed a balance in hand of £20 9s.

After the officers had been re-elected, with a few slight changes, the company adjourned for tea, and later listened to an interesting discussion, opened by Mr. George Hayes, on "Isle of Wight" Disease.

LANCASHIRE BEE-KEEPERS' ASSOCIATION.

ANNUAL MEETING.

The annual meeting was held on Saturday, March 11, in the Preston Scientific Society's Rooms, at 3 p.m. There was only a poor attendance owing to the severity of the weather and lack of cheap railway facilities.

Dr. Anderton, of Ormskirk, presided. A vote of condolence was passed with the relatives of the late Sir Geo. Pilkington, who was for many years a vice-president of the Association.

The report and balance-sheet were adopted. The latter showed a loss of 19s. 11d. on the year, which was considered very satisfactory under existing circumstances.

A vote of thanks was accorded to the committee, officers, and hon. auditor, for their services during the past year.

E. B. Dawson, Esq., J.P., of Aldcliffe Hall, was re-elected president. Mrs. Tomlinson, of the Vicarage, Bolton-le-Sands, was added to the list of vice-presidents, and four additions were made to the executive committee. Dr. Anderton and F. H. Taylor, Esq., were appointed representatives to the B.B.K.A.

In view of the prevalence of the "Isle of Wight" disease it was decided that no expert should be engaged to go on tour this year, and further that the practice of members visiting each other's apiaries should be discountenanced.

At the close of the meeting there was a honey and wax competition. There was a fairly good display in all classes except the sections and the ladies' classes. Dr. Anderton acted as judge, and was assisted by Mr. Bold. In the evening there was a unique exhibition of "Microscopic Studies of the Bee." There were several microscopes, and a large number of mounted specimens on view. In addition these were also thrown upon the screen by a special lantern, and explained in an interesting lecture by our hon. treasurer, F. H. Taylor, Esq., to whom the whole credit of the evening's entertainment belongs. He was generously assisted by friends of the Preston Scientific Society, who placed their instruments and services at our disposal.

We deeply regret that so few of our members availed themselves of this opportunity of receiving valuable instruction, combined with delightful pleasure.—*Communicated.*

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

CAUSE OF "ISLE OF WIGHT" DISEASE.

[9259] The threatened annihilation of our British Black Bee owing to the ravages of "Isle of Wight" disease is my reason for venturing to offer a suggestion that, unknown to me, may possibly have been already considered by the experts.

What is wanted is a real cure based on sound scientific principles, and to me it seems useless to seek for a remedy until we have found out what causes the disease. Ten years ago it was unknown, but every year since has increased in virulence. The fact that it generally makes its appearance in the autumn, or early winter, suggests that it is caused by something in the food, gathered during the later summer months and stored in the hives for after-consumption by the bees. Is there any flowering plant visited by the bees in search of nectar, or pollen, which

(*a*) is of recent introduction,

(*b*) is well-distributed and cultivated in large quantities,

(*c*) flowers in the late summer or autumn?

There may be others which fulfil these conditions: I will mention only one, viz., the summer-flowering chrysanthemum. I don't know whether bees visit the single or double varieties of this flower; but, if not the chrysanthemum, perhaps some other flower is the culprit. Provided we could trace the origin of the disease in some such manner as now suggested the remedy should not be far to seek.—W. JONES BROWN, Middleton, Lancs.

HONEY IMPORTS.

The registered value of honey imported into the United Kingdom during the month of March, 1916, was £1,386.—From a return furnished to the BRITISH BEE JOURNAL by the Statistical Office, H.M. Customs.

Queries reaching this office not later than FIRST POST on MONDAY MORNING will, if possible, be answered in the "Journal" the following Thursday. Those arriving later will be held over until the following week. Only SPECIALLY URGENT queries will be replied to by post if a STAMPED addressed envelope is enclosed. All queries must be accompanied by the name and address of the sender, not necessarily for publication, but as a guarantee of good faith. Correspondents are requested to write on one side of the paper only.

NOSEMA APIS.

[9045] In your issue of March 30, p. 101, I notice in the speech of Mr. A. G. L. Rogers, of the Board of Agriculture, on the "Isle of Wight" disease, he said it was caused by a "protoplasm" known as *Nosema Apis*. Is this correct, or should it be "protozoön"? In the next sentence he stated, "This organism did not kill the bee until it arrived at the later stages of existence." From what I have read this is also incorrect, but I should like your opinion.—QUERICUS.

REPLY.—It should be "protozoön." Probably it was a *lapsus linguæ* on the part of Mr. Rogers, as in several reports we have seen it is printed "protoplasm." As to the second part of your query, we quote from the supplement to the Journal of the Board of Agriculture, No. 8, p. 63, "It is of interest and of practical importance to note that many bees contain only the meront form of *N. Apis* at the time of their deaths. The tissue destruction due to these young forms of *N. Apis* is very extensive, and produces weakness and exhaustion." In supplement No. 10, p. 15: "During the early part of the season large numbers of bees dying of young stages of *Nosema Apis* (meronts chiefly) were examined." On page 24: "In every case, however, we failed to find spores in the dying bees, although the presence of young forms could be demonstrated."

Will our correspondents please see that all postage is fully prepaid? We cheerfully give advice free, but we cannot afford to pay 2d. or more on underpaid letters as well, and for the future letters, or parcels, that are not sufficiently prepaid will be refused. Inland letter rates are: Not exceeding 1oz. in weight, 1d.; exceeding 1oz., but not exceeding 2oz. in weight, 2d.; for every additional 2oz. (or fraction of 2oz.), ½d.

Notices to Correspondents

Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. All questions must be accompanied by the sender's name and address, not necessarily for publication, but as a guarantee of good faith. There is no fee for answering questions.

W. SEAL (Hants).—*Discoloured section.*—The section has contained brood; use a queen excluder under the section racks.

J. P. C. (Essex).—(1) The affected bees will die off, and as a consequence there will be a smaller quantity of excrement. We cannot say that the colour or quality denotes either improvement or otherwise. (2) In place of N. Beta.

J. W. WILLIS (Durham).—(1) Mr. J. W. Eggleston, 1, Hutton Avenue, Cockton Hill, Bishop Auckland. (2) No. (3) Yes. (4) Natives are more susceptible than either of the other two. (5) We prefer natives. You might try Dutch, but note they are prone to excessive swarming.

Honey Sample.

CYMRO (Anglesea).—The honey is good, and worth showing, but we do not think it would secure high honours at the "Royal." It might take a third prize or h.c. Flavour is good, aroma fair, the granulation not quite smooth enough.

Suspected Disease.

YOUNG BEGINNER (Norfolk), H. E. C. CARTER (Blackheath).—It is "Isle of Wight" disease.

R. THOMAS (Cowbridge).—Nos. 1, 3, and 5 were too dry for diagnosis. Nos. 2, 4, and 6 had died from "Isle of Wight" disease.

"M" (Enfield).—(1) There are symptoms of "Isle of Wight" disease. (2) We do not know what guarantee you had as to their health. In a stock with "bees on eight frames" that number of frames should be covered by the bees. So far as we can see you are entitled to the return of your money. You would probably have to sue for it. Whether you would recover would depend on the view the judge took. In future use our deposit system. (3) Yes, quite likely.

Special Prepaid Advertisements

Two Words One Penny, minimum Sixpence.

Will advertisers please read these Rules carefully in order to save trouble, as they will in future be strictly adhered to.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not permissible at above rate, but will be inserted at* 1d. *per word as* "**Business**" *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of* 3s. *per* ½*in., or* 5s. *per inch.*

PRIVATE ADVERTISEMENTS are only intended for readers having **Surplus Stock** *to dispose of.* **Driven bees, Nuclei,** *and* **Queens that are reared or imported for sale,** *are Trade Advertisements, and can only be accepted under trade terms.*

Advertisements must reach us NOT LATER than FIRST POST on TUESDAY MORNING for insertion in the "Journal" the same week.

Orders for three or more consecutive insertions in "The Bee Journal" entitle advertisers to one insertion in "The Bee-Keepers' Record" free of charge.

PRIVATE ADVERTISEMENTS.

MR. T. PULLEN begs to thank his many customers for their past favours, and begs to announce that owing to his having to serve with the colours his business will be suspended through the duration of the war.—Ramsbury, Hungerford.

HIVES, a few W.B.C., well made, with lift, good value, 12s. 6d. each; Standard frames, wired foundation, 6s. dozen; 100 drawn out shallow frames, clean, healthy, 5s. dozen; section racks, 1s. 3d. each, or completely fitted, 3s. 3d. each.—ADVERTISER, "BEE JOURNAL" Office, 23, Bedford-street, Strand, W.C.

ELDERLY MAN, expert, competent to take charge of any apiary, poultryman, open to engagement.—BOX 12, "BRITISH BEE JOURNAL" Office, 23, Bedford-street, Strand, W.C. v 91

WANTED, Canaries, in exchange for three W.B.C. hives, perfect condition; what offers?—H. PEGRUM, Sudbury, Suffolk. v 90

PRACTICALLY new, used one season, two Taylor's W.B.C. hives, Wilke's excluders, Porter escape board, large extractor and ripener, cheap, £3; also nine dozen 1lb. screw-cap glass bottles, 14s., carriage free; also Simmins' double Conqueror, good condition, 15s.—MISS SERGEANT, Newfields, Walmersley, Bury. v 89

HIVE, with healthy stock, on 9 bars, empty hive, 12 fully drawn shallow bars, Wilke's patent feeder, bottle feeder, smoker, 48s. 6d.—PIGGOTT, Duffield, Derby. v 92

GEM Phonograph, 30 records; exchange for bee goods.—42, Bromwich-street, Bolton. v 93

FOR SALE, several stocks of English Blacks, established on standard frames, healthy and in good condition, price 22s. per stock of eight frames, travelling box 5s., returnable, or in good standard hives, 32s. per stock.—H. TURNBULL, 71, Commercial-street, Norton, Malton. v 86

BRITISH BEE-KEEPERS' ASSOCIATION.

The Council of the British Bee-Keepers' Association are anxious to obtain gifts of honey for the wounded soldiers in the London Hospital, where it is urgently needed both for food and medicinal purposes. They will, therefore, be grateful for gifts of same, no matter how small, from bee-keepers throughout the British Islands. It is unnecessary to explain our obligations to these brave fellows, who have sacrificed health and limbs for the sake of our country. Gifts should be sent addressed to the Secretary, B.B.K.A., 23, Bedford Street, Strand. The donors' names will be published in the "B.B.J." and RECORD.

W. HERROD-HEMPSALL,
Secretary.

HONEY FOR LONDON HOSPITAL.

Amount already received ... 240½ lbs.

A ROLL OF HONOUR.

Although bee-keeping is considered a minor pursuit, we venture to say that it has provided more fighting men than the usual average of any industry. To place on record the part the members of our craft have played in the present war we propose to make a "Roll of Honour," and shall be pleased if our readers will forward us the **Names** and **Addresses**, together with the **Regiment** and **Rank**, of any bee-keeper serving his King and Country at home or abroad; also if killed or wounded.

OBITUARY NOTICE.

MR. J. W. BREWER.

I enclose herewith a cutting from the *Bath Herald* of Friday, April 14th, concerning the death of Mr. J. W. Brewer. Mr. Brewer was a valued correspondent of mine, a loyal friend, and delightful companion. For the last year or two Mr. Brewer had interested himself in the close observation of humble bees, being prompted thereto by having read Prof. Sladen's monograph, which I had lent him, and during the previous winter had set up some most beautiful specimens of various kinds of humble bees. Had my friend been spared to us I feel sure that we should have had many a delightful and instructive address on the pursuit that he had so long engaged in and which he loved so well.—F. DE SILVA, 5, Victoria Road, Bath.

"The death of Mr. John William Brewer, headmaster of Walcot Boys' Council School, and the famous local authority on bees, took place on Thursday, at his residence, Glen Lynn, St. Saviour's Road, at the age of 61. Mr. Brewer, who had been seriously ill for some time with heart trouble, was one of the oldest and most respected schoolmasters in Bath. He had been at Walcot 36 years, and before the School Board built the school he was at the Walcot Chapel School. He was one of the first head teachers under the evening school system in Bath, being the teacher at Kingsmead Evening School in 1892. As a bee-keeper he was the best known expert in the West of England, lecturer for the County Council, and frequently judged and demonstrated at shows. In 1904 Mr. Brewer obtained the first class diploma of the British Bee-keepers' Association as an expert on bees.

"Mr. Brewer was a native of Cheltenham, and came from Southampton to Bath in 1877. He was president of the Bath Teachers' Association in 1904. The deceased gentleman was also very well known as a Wesleyan local preacher."

WAIKATO (NEW ZEALAND) BEE-KEEPERS' ASSOCIATION.

DAY AT RUAKURA.

The honey industry is rapidly growing in importance in New Zealand, and there are at present several bee-keepers' associations in existence, in addition to the national body. There is also the New Zealand Honey Producers' Association, a separate organisation, which sees to the marketing of the produce in England. The industry is carried on very extensively in Waikato, the local association approximating 40 members, whilst last season, which was a very poor one, something like 27 tons were exported from the district, in addition to the large quantities consumed locally.

A general meeting of the Association was held at Hamilton recently, when business in connection with the National Association was discussed and Mr. E. W. Sage (Ohaupo) appointed secretary, vice Mr. Teed, who has resigned to offer his services to the Imperial Government.

A social gathering was held in the apiary grounds of the Ruakura State Farm, where nearly 100 people witnessed a series of

demonstrations by officials of the Association and Government experimentalists, and spent an enjoyable day amongst the hives.

Prior to luncheon served in the grounds, the manager of the farm, Mr. A. W. Green, welcomed the party, and expressed the hope that the gathering would be the forerunner of many such visits and that a field-day at Ruakura would be an annual fixture. He mentioned the presence amongst them of Mr. Pope, Secretary for Agriculture; Mr. Kirk, Director of Horticulture and Apiary Division; Mr. Hopkins, one of the pioneer bee-keepers of the Dominion; Mr. Westbrook, Apiary Director for the district, and Miss Hart, officer in charge of the Ruakura Apiary.

Mr. J. F. Hammond (Mayor of Hamilton) and Mr. R. F. Bollard, M.P., also welcomed the visitors, and trusted they would spend an enjoyable and profitable time.

Mr. J. S. Cotterill, president of the Waikato Bee-keepers' Association and National Association, said that while he had only visited Ruakura on one previous occasion, he felt that if he was in need of a queen bee he would send to Ruakura for it. The speaker mentioned that a honey-packing department had been established at Claudelands on co-operative lines, and he urged all bee-keepers to support it in order to help the industry and to steady the local market. The English market was assured for the next two years, thanks to the efforts of the New Zealand Honey Producers' Association, who had inaugurated the honey-packing depot. Were it not for the fact that they had pulled together as an organisation, bee-keepers would have been faced with smashing heavy prices as in the past, when the wily merchant controlled the market. There was no desire on the part of the Association to exploit the public, but bee-keepers were entitled to a fair wage. (Applause.)

Mr. Pope said he was quite convinced that the honey industry was destined to occupy a very prominent place in the Dominion. When the people of New Zealand acquired the honey-eating habit, as they certainly should, he thought the industry would receive a tremendous impetus, and he felt confident in advising experts to go on increasing their hives. The export prospects were bright, and while the price of butter remained high, the price of honey was likely to keep up also. A deputation had waited on him from the Waikato Association that morning, and as a result of their counsel he thought they would find that in the near future work of a more strictly experimental and instructional character would be undertaken at the Ruakura Apiary. He was sure the Minister of Agriculture was equally interested in the matter. The New Zealand regulations governing the export of honey would come into force before long, and while there would be certain restrictions, he thought they would work out to the benefit of the industry.

One of the most interesting exhibits was a stand of bottled honey, indicating the results of experiments with the hydrometer, which was first introduced for testing the moisture in honey by Mr. I. Hopkins, late chief Government Apiarist. New Zealand was the first country to adopt the hydrometer test, and by it a definite specific gravity has been fixed at which honey will keep. This is of incalculable benefit to the industry, as apiarists are thereby able to ascertain exactly when the honey is ripe and ready for extracting. The standard fixed, after exhaustive experiments, is 1.20 specific gravity, which is recorded when the water content is 17.40 per cent. This specific gravity has now been accepted by the New Zealand Honey Proflucers' Association as the standard for marketing, and the exhibit at Ruakura is probably unique in the world.

Mr. G. V. Westbrook, who has been carrying out experiments with the hydrometer, recently conducted a series of tests in reliquefying the honey specimens which returned from the Panama Exhibition. He found, as a result, that for each ten points of temperature recorded on the thermometer the hydrometer fell one point, owing to the thinner consistency of the liquid. Mr. Westbrook explained the working of the hydrometer, and carried out certain tests in proof of his statements.

BLURTS FROM A SCRATCHY PEN.

THE MYTHS OF "GODS AND BEES."

I have a crow to pluck with "M.," or perhaps it would be more correct to say a small rookery. In the first place, he has been beforehand with me in writing of the subject which he has chosen. It was so nice, easy, and interesting, that I had been compiling extracts, quotations, and a whole pile of evidences anent the various ways in which these gods, and goddesses, had interfered in bee-keeping. If the tales told of them were only true, these same deities must have been the earliest members of our craft, and then to think that I have been "too late." Ah, well! There are others, lately, who have been "too late" as well as myself, and the consequences have been much more disastrous. But I have this consolation—I don't think the subject could have found anyone more capable of handling it, anyone who knows so well how to surround it with the dreamy half light of poesy.

And that's just what brings in the second

bird that we have to divest of its feathers. My argument is, that for the sake of the poetry, "M." is a perverter of history. For the moment we must touch on a serious subject. Excepting that small part of Asia influenced by Judaical religion, the Biblical traditions had been lost, almost. A faint trace of those traditions existed, more especially in the Assyrian and Egyptian kingdoms, as might be supposed considering their neighbourhood to Israel, but in the greater world outside these nations, men only saw "the marvellous agency of the seasons," the "fearful and terrible" forces of Nature (I hope "M." will forgive the liberties I have taken with his text), and naturally, knowing these were supernatural, they sought for supernatural authors. Therefore they made gods for themselves, who were supposed to control these forces. Now to read these myths as in the ornate periods of "M.," they would be "beautiful in conception and elevating in their tendency." But what are the facts? One might almost paraphrase a well-known proverb, "Tell me your nation, and I will tell you your gods." In the fierce and rugged north, hardy Norseman, who lived only to fight, worshipped "Thor," the hammer thrower. In Britain, under the oaks, and amid the monuments of Stonehenge, and where Skiddaw and Scawfell throw their shadows over circled stones, the Druids held their bloody rites. But in the sunny south, where in Mediterranean seas the hot sun stimulates, there their gods were as themselves, lascivious, and creatures of passion. No! I am afraid there mythology would be anything but "elevating in tendency." I do not think the "spiciest" of our modern journals dare tell the tale of their intrigues (to use a very mild word), their love making, and their little weaknesses. And this in gods, too! I am afraid the Public Prosecutor would have a word to say in the matter. Forcibly one is reminded, in reading of these deities of ancient Rome and Greece, of the story told by Virgil in his Georgics, about the steer which, lying festering in the sun, hatched out swarms of insects. We know they could not have been bees, as he relates. That would have been an impossibility, and we also know that the corruptions hatched out from such a carcase were of the filthiest nature. The comparison is exactly true. Their own poets are the testimonies against them.

But I am falling into my usual habit of wandering away from my subject, which is supposed to have some connection with bee-keeping. There is a certain amount of justification for "M." to introduce these myths of ancient mythology into his article, for I do not see how he could have avoided it. The same unknown nature which the ancients saw so terrific in the earthquake, worked gently, and in a lovable manner, through the bees. We know that chapters have been written on the superstitions and folk-lore of bee-keeping in modern days. No doubt, as the subject is "Ancient Bee Literature," "M." will give us the treat of his researches in Aristotle, Virgil, Columella, and other writers; I shall look forward to it. But, after all, these writers were but the collectors, the enregisters of the bee superstitions of those days. They are the links that bind us with the past. It is notorious how, if a few bee-keepers get together, they will talk hours about their hobby. It was the same of old. Bee-keepers had their "bee chats" in those days. Virgil, Aristotle, and others of that ilk were not practical bee-keepers. They only recorded the wandering traditions. Hence their mighty errors. Should our world exist another thousand years, what will posterity think of our bee books of the present day? It is only natural to suppose they will have made gigantic strides by then, and will read with amusement (if copies of the BEE JOURNAL are still in existence) of our quarrels over Bee Diseases Bills, and skeps, and our theories about "Isle of Wight" disease.—J. SMALLWOOD.

A CONTINENTAL TRIP.

Since my last letter under this head, I am pleased to say I have invaded a considerable amount of bee territory, apiaries of from one to nine hives, generally in skeps with covers like those so nicely depicted by Sergeant Atwell. In one case one of these skeps was placed on a 5in. eke, which appeared to be well built down with comb, and the bees were in a very thriving condition judging by outward appearances on January 29th. But although apparently healthy, with skeps one has still to rely on a certain amount of guess-work as to the quantity of stores, which are so essential at this period for success if not for continuity itself: but when everything goes all right one might expect some splendid swarms by adopting this idea. In some instances small sheds of brick and tile were erected over them, and in others straw shelters, while in a very few apiaries the hives were bar framed. This is evidently due to ignorance, or perhaps fear, and not from choice. Grand results ought to be made by the business idea of "frame hives" out here.

Interesting monuments of by-gone days are the thousands of crucifixes and crosses, erected on most corners and main thoroughfares, sometimes in lonely fields or byeways, which are generally surrounded by neatly-kept arbours of trees. In some instances

where a cemetery is near, there are dozens of small wooden crosses at the foot, I suppose for processional purposes. One cannot but admire the nation that will thus publicly demonstrate the religion, of which, without entering into any controversy, this emblem of the cross is the only medium of expression.

Another touching episode, which ought to go far to cement continual friendship with our nation, was a small procession of English and French soldiers' funerals, the guards of honour of the former were French and the latter British. I have been struck with the exceeding shyness and rarity of birds here. I have heard a blackbird in the distance but have never seen one, and until this last fortnight have not seen even a robin; but there are plenty of small birds now, so I conclude they must go south, but they have selected a bad time for return, as we have had it sharp and cold the last few days, accompanied by a good layer of snow.—A. H. HAMSHAR.

SOME SCRAPS.

By A. G. Gambrill, Richmond, Surrey.

Bees Fanning.—Even to old bee-keepers new experiences crop up; I will relate one. A gentleman sent for me to attend to a swarm that was already hived in a skep. In the dusk of a very hot evening I cut queen cells out, and returned the swarm to the frame hive. I was able to get an ideal board, to slope on flight board, so that they could be run in at entrance as usual, but I was not so fortunate in obtaining a white cloth to lay on the board, so two very small white cloths had to do duty, and this fact yielded the new experience. I laid one cloth on close to the entrance, and the second cloth on top of it, lapping over an inch or so. The edge of the second cloth was about 5 or 6 inches away from the entrance, and being laid on top of the first cloth had its edge toward the entrance. The bees went in well, and when nearly all in, it then being dark, my client and I were standing talking a few feet away, when suddenly he said, "What's up with that cloth?" I was puzzled, for the cloth was moving in a very uncanny fashion. I felt perhaps toads, mice, or even a hedgehog might be on the war path. I went over to investigate. There I found a great number of bees fanning, and the current of air was causing the cloth to ripple in wave fashion. On putting my hand and face close down I was surprised at the current of air our little people were producing.

Swarms Settling.—An active working expert with a large clientele has very many opportunities of noting the varied places swarms choose to settle in, and last season produced a novelty in this respect for me. I was asked to undertake a journey to Golders Green, in the N.W. district of London, to hive a swarm that had been out several hours. It was about 8.30 in the evening when I arrived there, and had the swarm pointed out to me on the lawn. A deck chair was there, and the swarm had selected the awning of the chair, and so it became necessary to shake them off the fringe trimming to which they clung pretty tightly.

A Conjuring Trick.—I saw in a journal recently that someone reckons to have discovered the secret of the Indian mango trick, where the conjurers of that Empire plant a seed in soil, cover it with a cloth, and produce, not only a tall plant, but fruit on it. This genius reckons that the conjurer gets his soil out of ant hills, saying that as ants contain a large portion of formic acid, the soil in course of time gets charged with it, and this is what produces this sudden growth from seed to plant, five minutes at the outside; in fact, music-hall managers very rarely will allow any of us to present this kind of trick to occupy more than five minutes. Well, as a bee-keeper, I know something of formic acid, and smile once. In the dual role of conjurer and bee-keeper I smile twice, and broadly at that. And being in possession of the secret of the Indian mango trick, I smile a hundredfold, for the trick can be done in a flower-pot filled with anything, such as sawdust, cork dust, or even confetti, though soil is generally used, of course, to add to the effect.

Early Mention of an Exhibition of Bees.—Is the following the first mention of an exhibition of bees, I wonder? If so, it is most interesting to us as bee-keepers. I have just had the privilege of looking through a very old book, and in it is an account of Marylebone Gardens, no longer in existence. From the book I cull the following :—

> "This year (1766) an exhibition of bees took place in the gardens."

It is interesting to note they were at this date called Marybone, and at other dates were spoken of as Mary-le-bone (Mary the Good). And yet another rendering, for in the immortal Pepys's Diary is the following :—

> "May 7th, 1668. Then we abroad to Marrowbone, and there walked in the garden; the first time I ever was there, and a pretty place it is."

"*Some*" *Savages.*—I have often met irritable bees, when it has been advisable to shut down for the day, but only once have I met real genuine savages. It was

two seasons ago. I was called in to look through three stocks in the month of August, and on that date the bees offered no resentment. The gentleman thought he would like one lot re-queened. And what a re-queening was that! They simply would not let me find her majesty. I tried next day: just as bad. Next day the same, and I finally had to put on veil, the first time for very many years. I decided to give a week's rest—no better result. Looked up Prof. Cheshire on bees, read of his "Rottingdean savages," adopted all his methods—no use. I lost my temper—the bees lost theirs—here at least we were on equal ground. After reading Cheshire I tried very little smoke. The next day tried a lot of smoke, and yet another day no smoke at all: no use. I tried bright days, dull days, rainy days: tried at early morn, midday, late at night. I was tired of it, so was my client. Finally I got chemicals (as Cheshire), saturated some rags with it, to use in smoker, tied trouser legs (put on veil again this day, you bet). Put on double gloves (the first and only time in my life), then I put them "through the hoop," and so secured her majesty.

SWARM PREVENTION AND CONTROL.

NOTES ON THE ADDRESS TO MEETING OF KOOTENAY BEE-KEEPERS' ASSOCIATION, NELSON, B.C., BY MR. J. SHEPPARD.

The prevention and control of swarms is of the greatest importance to bee-keepers in order to secure good crops of honey. Strong colonies are the only ones to be relied on to give good results during a honey flow. Much thought and ingenuity have been expended on the problem of swarm prevention, but there has not been any system evolved, and probably never will be, that will permanently change the natural disposition of bees to swarm, the act of swarming being Nature's provision for perpetuating the species. The immediate causes of swarming may generally be attributed to either of the following conditions:—

1. A crowded condition of the colony so that the queen has not sufficient room to deposit eggs.
2. Want of sufficient ventilation within the hive.
3. A superabundance of drones.
4. The want of sufficient room for storing honey during a honey flow.

Breeding queens by selection from colonies showing little or no desire to swarm has been tried and found helpful in arresting the swarming impulse, but as it would be impracticable for most bee-keepers to attempt this, or to keep such a strain of bees, when once established, from reverting, sooner or later, to the ordinary type, this may be regarded as not being of any general utility.

One of the oldest ideas for the prevention of swarming is the cutting out of queen cells. By systematically going through the hives once in every ten days and destroying all queen cells it is possible to stop swarming by this means. The operation, however, has to be very thoroughly performed in case a cell should be overlooked. Even when every cell has been destroyed, bees badly affected with the swarming fever, which has been likened to the condition of the broody hen, will swarm out without waiting to start fresh ones. One of the chief objections to this plan is that it takes up considerable time, especially when a good many hives have to be attended to.

A few years ago there was quite a rage for devices for hiving swarms automatically whereby the queen was trapped or conducted into a new hive adjoining the old one where the bees would follow her. These devices, although excellent in theory, did not always work out in practice, according to programme, and I suppose they have all by this time been discarded. I have in my possession a Silver Medal awarded by the British Bee-keepers' Association, in the year 1892, at the Royal Agricultural Society's Show, Warwick, England, for what was then termed a self-hiver, showing that this was in vogue twenty-four years ago.

After a swarm has issued the most important thing to bear in mind is that the colony must be built up again quickly, and as near as possible to its original strength or the honey crop will be very considerably curtailed, or possibly lost altogether. One of the plans frequently adopted to effect this is to move the old hive to a new position and put the swarm in a fresh hive in its place. By this means the swarm will be strengthened by any bees that may be out flying in the fields, and a good many bees from the old hive will also go back to it. The swarm may also be further strengthened by transferring some of the frames of sealed brood from the old hive. The old hive will then be so weakened that it will not be strong enough to throw off any after-swarms, but headed by a young queen it will be able to build up into a good colony for the following season. Any supers on the old hive should be transferred to the swarm on the old stand. An objection to this system is that a colony so treated will sometimes swarm again when a similar performance has to be repeated.

Another plan that gives good results is to put the swarm in a new hive on the stand of the old colony, setting the old hive against it and facing the same way.

A week later move the old hive to a new stand 10 feet away.

A favourite method of swarm control in some parts of the States is what is known as the Demaree plan, and I want to explain to you later what I think will be found an improvement on this idea. The Demaree plan, pure and simple, is operated as follows :—Just before the colony is ready to swarm put all the brood except one frame in a second storey over a queen excluder, leaving the queen below with the one frame of brood and preferably empty combs, failing which frames with full sheets of foundation. Cut out all queen cells. The brood frames as soon as the brood hatches out will be used by the bees for storing honey. The Demaree plan slightly varied has been tried in Ontario under the guidance of the Ontaria Agricultural and Experimental Union (Mr. Morley Pettit, Bee-keeping Director), and has been found to answer well and to increase the honey crop. The variation consists in giving an additional storey of empty combs between the bottom storey and the brood, making three in all. By this means the old combs in the top storey, which may contain dark honey from the previous year, can be taken away before the bees begin to store the white honey crop of the current season in them.

The adaptation of the Demaree plan I should like you all to try this year, if possible, and report results at the end of the season, works out as follows :—

As soon as the bees begin to cover the outside frames in the brood chamber, usually early in May, give them an extra body containing another set of combs. If combs are not available full sheets of foundation must be used. I think the best way is to put this body underneath the other so that the brood will be above, and then not so likely to get chilled. This will give the queen all the room she can possibly require for a considerable time, and the colony should go ahead very rapidly and get strong. At the commencement of the honey flow, which is generally towards the end of June, or so soon as there are any indications of swarming, search for the queen and place her with one frame of young brood in the middle of the empty combs in the first storey, that is next the bottom board, as in the Demaree plan, then put on the queen excluder. Next will come a second storey containing a set of empty combs. Over this second storey place a screen wire escape board, similar to the one I have here, with the slide over the escape opening closed, and immediately above this a third storey containing the remainder of the brood. If there is more than sufficient brood to fill this storey it can be used for strengthening weak colonies. A small entrance is provided above the screen wire board by means of the simple device I am now exhibiting, so that the bees can fly from the top storey, and a good many of the adult bees will go back to the main entrance below. This will not affect the brood, however, which will be kept warm by the heat ascending from the lower storeys.

One advantage of using the screen wire separation between the second and third storeys is that there is no need to search for or cut out queen cells at the time of putting up the brood, except on the one frame placed below containing the queen. Should it be decided to do this subsequently, and a queen hatch out in the meantime, she cannot get down below and cause trouble. The upper storey can be kept continually under observation and control. If preferred a young queen can be allowed to remain in the top storey. She can come out at the upper entrance to get mated, and as soon as she is laying can be utilised to take the place of the old queen. Thus no time will be lost, and the risk of requeening with a strange queen dispensed with. Should it be desired not to supersede the old queen the queen cells in the upper storey can be destroyed, and all the brood permitted to remain and hatch out, so strengthening the colony below, in which case a large amount of honey should be obtained. It would no doubt answer very well to put the plan into operation after a swarm had come off, and also permits of other variations.

The screen wire board will, I think, be found a most useful appliance in the apiary in other ways than those mentioned. When fitted with a Porter bee escape it can be used for clearing supers, and will be found preferable to the usual all-wood escape board, as the heat ascending from below will help to keep the combs warm after the bees have left them, and so make them easier to extract.

It can also be used for pushing weak colonies along by putting them up over strong ones with the screen wire between. In this case a small piece of queen excluder zinc would have to be fixed over the escape opening to allow bees to come up from below.

In winter it can be used for placing next the frames, under the packing, thus providing a bee-way over them, and permitting the colony to be inspected at any time without disturbing the bees. Should they be found to require feeding in winter or early spring, a cake of candy can be placed over the escape opening, after removing the slide. Syrup could also be fed by inverting a Mason jar, with perforated cap, over the wire screen, which, as the position of the cluster can be seen, could be placed directly over it.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

BEE-KEEPING EXPERIENCES IN 1915.

[9,260] I send an account of my experiences last year in case you may think them of sufficient general interest to publish. At the beginning of 1915 I was fortunate enough to have three stocks alive, many bee-keepers round here having lost all.

Here is the record of the three hives, condensed from notes which I made during the year.

Hive No. 1:—Italians, with 1914 queen. Examined April 15th, bees covering six frames. I had suspicions of "Isle of Wight" disease in my apiary at the very beginning of the year, but this stock progressed normally throughout May, June and July, except that on three days, May 10th, 15th, and June 28th the same thing happened. Whilst apparently all right at midday, in the evening there were between one and two hundred dead and dying bees on the ground in front of the hive. On each occasion I sprayed the alighting board and ground with Izal, mixed with water in the usual proportion, and in two or three days the bees were all right again and "carrying-on" as if nothing had happened. From this stock I took 70 lbs. of extracted honey at the end of July. (Very little work was done in July owing to bad weather.) During August and September I was away from home, and when I returned I found this stock rapidly failing from "Isle of Wight" disease. I sprayed the bees with Simmins' B-well mixture, and the crawling stopped almost immediately. But on examination I found the stock was too weak to stand a chance of wintering safely, and, as I wished to test the value of the mixture, I closed the remaining bees on to five frames, by cutting a piece of queen-excluding zinc to fit exactly, and pasting paper over it. Then, having bought a lot of driven (black) bees, I hived these on October 13th on the other five frames, and left them to eat their way through and unite with the original bees. This they did in about a week's time, and I was able to spray them once or twice before finally closing down for the winter. They have had no artificial feeding with the exception of two 1 lb. cakes of candy, and to-day (March 16th) they were flying very strongly, taking in large quantities of pollen, and showing no signs of disease. Spring examination at the end of the month will show if the old queen is still alive in addition to the one at the head of the "blacks."

Hive No. 2:—Italians, with 1913 queen the mother of Stocks 1 and 3. I examined this lot on April 11th and found it rather weak, probably owing to the old queen, which I had very good reasons for retaining. It progressed slowly, but built up into a strong stock by the end of June. Owing to the bad weather in July, it gave no surplus. I fed this on syrup, medicated with B-well mixture, and to-day bees were flying almost as strongly as from No. 1 Hive, and carrying in masses of pollen.

Hive No. 3:—Italians, with 1914 queen. Perhaps the less said about this stock the better. I may say that most of my time was taken up in training future officers in an O.T.C., which necessitated my being at home very little, and I put my mismanagement of this hive down to that fact. I examined this hive on April 15th and found bees covering six frames. Progress was normal to June 7th. On the 7th and 8th they swarmed whilst I was away, but on each occasion alighted on the hive and re-entered. On the 16th one of my maids saw them swarm but did not watch them, and said nothing to me till next day; consequently I had no means of telling whether they re-entered the hive as before or decamped. On the 19th they swarmed whilst I was at home, and settled in the middle of a row of peas, and it took me five hours to secure them. Having cut out all queen cells except one, I re-hived the swarm, catching and destroying the queen. For some reason the cell I left proved unprofitable, and I found that the bees were queenless on July 18th. By this time bees were very weak in numbers, I re-queened successfully with a Simmins' Golden Italian, but whilst away at the

School of Musketry, Hythe, in August, the hive was robbed out. Despite this series of catastrophes I took some twenty sections and ten to fifteen pounds of extracted honey from this stock.

In conclusion to a very long letter, may I say that I quite disagree with you and your correspondents in advising destruction immediately signs of "Isle of Wight" disease appear. I see no likelihood of the disease being stamped out in that way. If every wasp's nest and every wild bees' haunt could be destroyed something might be done by that means. I rather agree with those who think that as a result of constant experiment some cure may be discovered which will enable the bees to overcome the disease. After all, is it not experiment that has enabled such wonders to be worked in medical science as applied to human beings?

(Rev.) M. S. Page.

"ISLE OF WIGHT" DISEASE.

[9,261] Will you allow me space to reply to Mr. Woodley (9,255, page 119). He says, "Our friend says burn the lot." I find no such record in my letter (9,233), therefore I say he is wrong, as were the men of knowledge, who thought they could keep their bees free from the "Isle of Wight" disease. Since then they have found they were living in a fool's paradise, and the chickens have come home to roost. Mr. Woodley refers to bee-keepers losing 75 or 100 per cent. of their bees. This had never any right to be, and I am satisfied we should not be in the position we are to-day had it not been for Mr. Woodley and a few of his friends; while our true friends of the B.B.K.A. were trying to get a Bee Diseases Bill passed, a few of these gentlemen of knowledge were giving their time and money and visiting the Board of Agriculture trying to defeat this Bill. These persons were making it easy to send diseased bees all over the country. The first diseased bees sent into this county came from a wealthy dealer, the second lot sent to North Derbyshire came from another dealer, the latter also sent another diseased stock to Lincoln. At this time I was receiving letters like newspapers. If I ask one of the "conscientious objectors" their view *now* they are dumb.

Now with regard to burning diseased combs. I would not do so as wax is money to me, for I require 1 cwt. every year; neither would I advise any up-to-date bee-keeper to do so, but there are cases where it would be sound advice. Last autumn I visited an apiary of five stocks, and recorded that three had "Isle of Wight" disease. Last month I called again and found two of them dead, two very weak, and one strong. As in this case money was no object, I asked that the dead bees, combs, frames, and quilts should be burned in the stokehole of the greenhouse. Ten days later I called again, and found them just as I left them, only they had been moved a few yards from the others. I saw the gardener, and again pressed for them to be burned at once, and told them to be careful not to drop anything about. Now, Mr. Editor, I think it was sound advice in this case.—J. Pearman, Penny Long Lane, Derby.

QUEEN CEASING TO LAY.

[9,262] One of your readers ("Anxious, Sandbach") has evidently had a similar experience to mine this spring. Towards the end of February I opened my hive on a fine day, and was alarmed to see no signs of brood and the bees covering only four frames, although earlier in the year I had seen brood. I put it down to the sudden changes in the weather we have had lately; snow at the end of March is quite unheard of in Jersey.

April has behaved itself well so far, the sun being quite hot. There is quite a nice lot of sealed brood now, and pollen and honey are being stored in big quantities. The wallflowers seem the favourite just now, and my bees are flying to them in hundreds. I grow a good many of these sweet spring flowers near the hives on purpose for the bees.

I have just spent a very happy hour or two in the apiary, being free of military duty for the week. I love my little bee friends, and can stand near the hives for hours watching them flying in and out, bringing in their loads of pollen. The hum of the bee is music in my ear; the note of their hum is B-flat.

I am glad to tell you Izal seems to have cleared "Isle of Wight" disease out of my apiary; there are no signs of disease to be seen now.

The wild bees are starting to be busy. I counted no less than nine different kinds in my garden this morning.—F. Neville-Colebrook, Jersey.

WASPS AND BEE DISEASES.

[9,263] Seeing the report in the "B.B.J." of a week ago *re* our competition for queen wasps, perhaps it may interest readers to know what made our association take these steps and how we did it.

1st, If a bee-keeper can carry the disease by taking no precautions as regards disinfecting himself, surely those robbers

and "long-distance" fliers, the wasps, must carry the disease, visiting diseased and healthy hives in their search of ill-gotten gains. (2) We are convinced wasps do suffer from "Isle of Wight" disease, as personally I found several nests last July and August, where they showed unmistakable signs of the disease.

We had very little money in hand, but at the annual meeting it was decided that the secretary should appeal for funds from all interested, to take on the destruction of these pests, and any other measures to check the disease. The appeal was successful, and prizes of £1, 12s. 6d., 10s., 5s., and 16 at 2s. 6d. each are offered for the greatest number of queens brought in by May 28th. Lady Violet Brassey, of Apethorpe Hall, is also offering similar prizes for the villages around Apethorpe, and from reports to hand there has already been a great slaughter.

Members are also taking trips around, and persuading those bee-keepers who have lost their bees, but do not realise the danger of leaving hives and combs about, to destroy combs, etc., and disinfect the hives. It is also hoped to raise enough money to start an association apiary for increase, the increase to be drawn for by members who have lost their bees, and so endeavour to re-stock the denuded villages.—L. Andrews, Acting Hon. Secretary.

"ISLE OF WIGHT" DISEASE.

[9,264] Is there any record of this or a similar disease being prevalent among bees about 40 years ago?

I commenced beekeeping just 30 years ago, and my apiary, which at one period contained over 60 colonies, was built up in the starting with driven bees. It was my practice for several years to drive the bees from several skeps owned by an old shoemaker in the adjoining village of Stokenham. He managed his bees very intelligently, and, supering early, he usually had good results.

He told me he had kept bees close on 40 years, but that at one period he lost the whole of his bees, six stocks. They had, he said, some disease, apparently in the wings. They came out and dropped off the flight board, or, as he put it, the stone (all skeppists in this neighbourhood used large stones to stand their skeps on), and were unable to fly. Some days, he said, the small plot, about 6 paces by 12, was covered with bees. He told me the disease appeared late in the summer, and the bees died out, leaving honey behind. Since losing the whole of my bees in 1914 (25 stocks), I have continually thought of this.

If the disease that was responsible for the wiping out of his apiary (and personally I feel sure it was) is the same as we now have, it could not have been so virulent, as I also remember he told me he had the ground limed all over and dug, and, going one season without bees, started the following year with the purchase of a stock in the spring from a village about three miles away. He said he had no trace of any disease either before or after.

I think on this occasion all the bees in the district have died, those in skeps as well as bar-framed hives.

I might add that the beekeeper never fed his bees on sugar syrup, and bar-framed hives were not in use in the district until some years after the period referred to.—Herbert Patey, Chillington, Devon.

SULPHUR FOR "ISLE OF WIGHT" DISEASE.

[9,265] In the article in the Journal by G. G. Desmond, Sheepscombe, Glos., "Bees to the Rescue" (page 92), he mentions an under dose of burning sulphur to living bees to kill the "Isle of Wight" disease. I should think if the dose was strong enough to kill the disease, it would also kill the bees. The idea suggested to me at once was, would it not be an exeellent plan, after one's apiary had been cleared out of bees by this wretched disease, to give the hives and racks a good *overdose* of burning sulphur by placing everything in a small room and using a sulphur candle, such as is recommended by doctors after a case of fever?

I have, unfortunately, been cleared out of bees on two occasions by this malady and am now about to venture on a third attempt. On each occasion I melted down all combs I had on hand, and burnt all the frames, and sections and clothing.

I thoroughly disinfected the hives and racks by scrubbing with hot water containing carbolic acid, and burnt all the crevices with a painter's lamp.

Two years ago I lost my first lot of bees, when, after going through all the process above, I purchased two colonies established on frames—one lot "Carniolan" and the other "hybrid Italian." They did very well; the worst part was incessant swarming, especially the second year, i.e., 1915. I increased the colonies to ten in the two years. I found throwing the swarms back was not much good, as they came out again in a few days, and thought by putting them in fresh hives they would be peaceful for a bit.

I took about 200 lbs. of honey from three or four stocks before the second week in July, 1915, and by Xmas the bees were all dead. J. Banting.

Will our correspondents please see that all postage is fully prepaid? We cheerfully give advice free, but we cannot afford to pay 2d. or more on underpaid letters as well, and for the future letters, or parcels, that are not sufficiently prepaid will be refused. Inland letter rates are: Not exceeding 1oz. in weight, 1d.; exceeding 1oz., but not exceeding 2oz. in weight, 2d.; for every additional 2oz. (or fraction of 2oz.), ½d.

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Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. All questions must be accompanied by the sender's name and address, not necessarily for publication, but as a guarantee of good faith. There is no fee for answering questions.

ANXIOUS (Notts).—*Queen Not Mated.*—A queen that was reared but not mated last year will not mate now. The longest time we have known to lapse between a queen emerging from the cell and mating is six weeks—and this only twice.

F. M. (Paignton).—*Disinfecting Hives.*—Scorch the inside of the body boxes and supers with a painter's blow lamp, or apply with a brush a solution of Izal or Calvert's No. 5 carbolic acid, one part in two parts of water, also wash the other parts of the hive with a weaker solution of disinfectant, a teaspoonful to a pint of water. Expose the hive to the air until the smell disappears. When dry apply a coat of good oil paint to the outside. Combs, frames, and quilts should be burnt.

H. G. (Dorset).—4 lbs.

Suspected Disease.

E. M. P. (Dorset).—The bees are affected with "Isle of Wight" disease.

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MR. T. PULLEN begs to thank his many customers for their past favours, and begs to announce that owing to his having to serve with the colours his business will be suspended through the duration of the war.—Ramsbury, Hungerford.

HIVES, a few W.B.C., well made, with lift, good value, 12s. 6d. each; Standard frames, wired foundation, 6s. dozen; 100 drawn out shallow frames, clean, healthy, 5s. dozen; section racks, 1s. 3d. each, or completely fitted, 3s. 3d. each.—ADVERTISER, "BEE JOURNAL" Office, 23, Bedford-street, Strand, W.C.

WANTED, a strong healthy May swarm of Italians.—D. SINCLAIR, Inchnuck Cottage, By Glenboig, Lanarkshire, N.B. v 3

WANTED, good geared extractor, Cowan preferred; state price; exchange Springer Spaniel puppy, 9 months.—LANG, Bollingham, Eardisley, Hereford. v 94

ONE Cowan geared extractor, £2 10s.; one cottage, 17s.; one ditto, geared, £1 7s.; above new, shop soiled. Wanted, skeps or boxes of healthy bees.—L. CURTIS, Brant House, Holbeach. v 96

WANTED, natural swarms, from frame hives. —Full particulars to MR. HANSELL, 56, Birkendale, Sheffield. v 95

FOR SALE, stock of bees, 25s.; hive, newly painted, 8s.; two uncapping knives and three Wilkes' feeders, as new, all healthy.—E. ROCKE, Clungunford House, Aston-on-Clun, Shropshire. v 98

STRONG natural Italian swarms, 16s.; seconds, 11s.; package returnable.—CADMAN, Codsall Wood. v 99

FOR SALE, hives, appliances, new honey tins; room wanted.—C. ROWLING, Wickhambrook, Suffolk. v 100

BRITISH BEE-KEEPERS' ASSOCIATION.

The Council of the British Bee-Keepers' Association are anxious to obtain gifts of honey for the wounded soldiers in the London Hospital, where it is urgently needed both for food and medicinal purposes. They will, therefore, be grateful for gifts of same, no matter how small, from bee-keepers throughout the British Islands. It is unnecessary to explain our obligations to these brave fellows, who have sacrificed health and limbs for the sake of our country. Gifts should be sent addressed to the Secretary, B.B.K.A., 23, Bedford Street, Strand. The donors' names will be published in the "B.B.J." and RECORD.

W. HERROD-HEMPSALL,
Secretary.

HONEY FOR LONDON HOSPITAL.

Amount already received ... 240½ lbs.

BRITISH BEE-KEEPERS' ASSOCIATION.

The monthly meeting of the Council was held at 23, Bedford Street, Strand, London, W.C., on Thursday, April 20, 1916. Mr. C. L. M. Eales presided. There were also present: Miss M. D. Sillar; Messrs. G. Bryden, J. Smallwood, G. S. Faunch, G. J. Flashman, A. Richards, A. G. Pugh, F. W. Harper, G. W. Judge, J. Herrod-Hempsall; Association representatives: J. Price (South Staffs.), W. Prior (Crayford), and the Secretary, Mr. W. Herrod-Hempsall.

Letters expressing regret at inability to attend were read from Messrs. T. W. Cowan, W. F. Reid, T. Bevan, J. B. Lamb, G. R. Alder, and Sir Ernest Spencer.

The following letter was read by the Chairman:—

Upcott House, Taunton,
April 18, 1916.

To the Chairman of Council,
British Bee-Keepers' Association,
23, Bedford Street,
Strand, W.C.

DEAR SIR,—I feel that I must write and thank the Council and members of the B.B.K.A. for their kind thought of me, and for passing the resolution of good wishes proposed by Mr. Richards at the annual meeting of the Society. It is very gratifying to find that after so long a connection with the B.B.K.A. I still retain the confidence of the Association, and regret that I have not been able to take a more active part recently in the work, which I follow with the keenest interest. I hope the time will soon come when I may be able again to attend the meetings and take part in the deliberations of the Council.—Yours faithfully,

THOS. WM. COWAN.

The minutes of the Council meeting held on March 16, 1916, were read and confirmed.

The following officers were elected:—Chairman, T. W. Cowan; Vice-Chairman, W. F. Reid. Finance Committee: Messrs. G. W. Judge, T. Bevan, G. Bryden, C. L. M. Eales, G. S. Faunch, J. B. Lamb, A. Richards, J. Smallwood, E. Walker, and Sir Ernest Spencer. Exhibition Committee: Messrs. G. R. Alder, T. Bevan, F. W. Harper, J. Herrod-Hempsall, A. G. Pugh, G. J. Flashman, E. Walker, and Miss M. D. Sillar. Publication Committee: Messrs. T. Bevan, C. L. M. Eales, J. B. Lamb, W. F. Reid, and J. Smallwood.

Board of Examiners for Paper Work: Messrs. T. W. Cowan, W. F. Reid, D. M. Macdonald, and Col. H. J. O. Walker.

Board of Examiners for Lecture List: Messrs. T. W. Cowan, C. L. M. Eales, G. J. Flashman, W. Herrod-Hempsall, G. W. Judge, J. B. Lamb, G. Bryden, A. G. Pugh, W. F. Reid, A. Richards, J. Smallwood, J. Herrod-Hempsall, E. Walker, and Sir Ernest Spencer.

Emergency Committee: Messrs. J. B. Lamb, W. F. Reid, and Sir Ernest Spencer.

The following new members were elected:—Rev. Dr. Brandon, Messrs. J. S. Baldry, E. Hollingsworth, H. Cheesmur, and J. F. Waters.

The following Associations nominated delegates, and all were accepted:—Lincolnshire, Mr. J. S. Baldry; Northumberland, Mr. W. J. Sanderson; Lancashire, D. W. Anderton; Sussex, Rev. A. C. Atkins.

The Report of the Finance Committee was presented by Mr. J. Smallwood, who stated that payments into the bank were: February, £35 19s. 6d.; March, £37 0s. 10d.; the bank balance being: February, £70 14s. 1d.; March, £173 5s. Payments amounting to £5 13s. 9d. were recommended.

Next meeting of the Council, May 18, at 23, Bedford Street, Strand, London, W.C.

HELPFUL HINTS FOR NOVICES.

By W. Herrod-Hempsall.

QUEEN-REARING AND INTRODUCTION.

(*Continued from page* 118.)

SLADEN'S BABY NUCLEI.

A divisible brood frame is made, so that the two halves can be used separately, as shown in Fig. 62. These are fastened together with metal clips, left side, and inserted into a strong stock to be filled with brood. When required, they are removed,

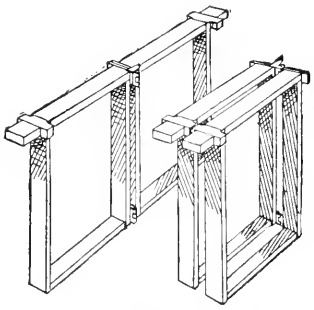


FIG. 62.

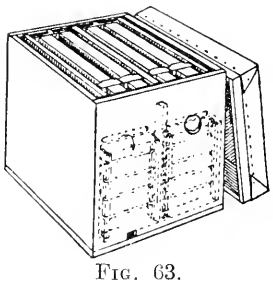


FIG. 63.

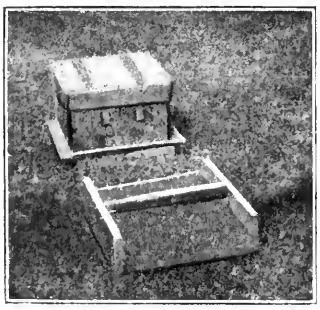


FIG. 64.

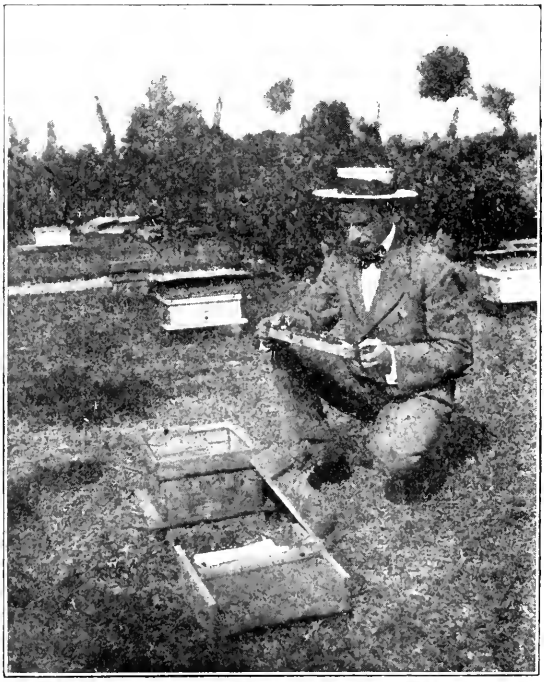


FIG. 65.

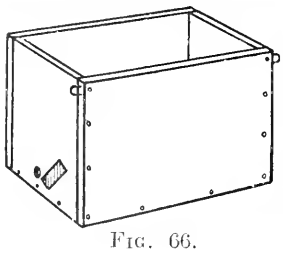


FIG. 66.

separated, and metal ends placed in position, as seen at right side, so that they fit into the nucleus hive, Fig. 63, divided by means of a tight fitting division board,

the entrances being at opposite corners, and the feeding arrangement in the space at the end, as described above. If desired, the division board can be removed and four combs used instead of two.

These divisible frames and double hives are used by Signor Piana in Italy. One of his hives is shown at Fig. 64, with the roof off, while at Fig. 65, the Signor himself is seen manipulating one.

SWATHMORE BABY NUCLEI.

A box, Fig. 66, is made of $\frac{7}{8}$in. material, of such a size that it will hold a couple of sections cut down to $\frac{7}{8}$in. in width. These are clipped with a twisting motion on to the under side of the lid by staples bent in opposite directions, as shown at Fig. 67. They are fitted with foundation, put into frames, and placed

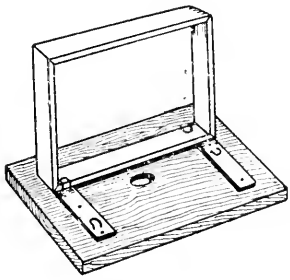


Fig. 67.

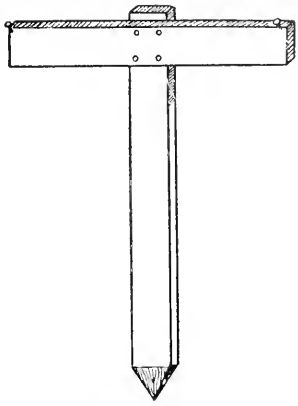


Fig. 69.

in a strong stock to get combs built and filled with honey. The box is painted with beeswax, about 1 in. up on the inside, to make it watertight. The entrance hole is covered with perforated zinc, and fastened with a tack at one corner, so

Fig. 68.

that it can be turned on or off. A hole in the lid allows the insertion of a cell in a flanged cup, or a queen in a cage, to be introduced.

After sufficient combs have been obtained, each box is fitted with a full comb and one with a starter, the perforated zinc is turned over the entrance, and either an artificial swarm, minus queen, is made in a swarm box, or a natural swarm if available can be used. In the evening, when the bees have settled down, the baby nuclei are set out in a row and a cup full of bees from the artificial swarm is dipped into each one, as Fig. 68. They are then placed in a cool, dark room until the next morning, when they can be placed out on the ground, or hung up on convenient posts; or, better still, T stakes, Fig. 69, with a couple of hooks to go into the staples in the box, can be driven into the ground, upon which they are hung. A virgin queen or ripe queen cell is given, and the bees liberated, when they will settle down.

(*To be continued.*)

THE PASCHAL CANDLE.

The following interesting cutting from the *Catholic Fireside* of April 22nd has been sent by Mr. F. de Silva, of Bath:—

"The Paschal Candle is one of the most beautiful and mysterious symbols of Our Blessed Lord Jesus Christ. It is made of pure beeswax and of linen wick. It is blessed on Holy Saturday with a very striking ceremonial, is adorned with five grains of incense shaped as nails and fixed in it in the form of a cross, and is lit from the triangular candle with the fire blessed on that day.

"To understand its symbolism, which refers to the God Man Jesus Christ, risen from the dead, the Light of the World, let us study its make-up.

"The Paschal Candle is made of beeswax. Bees have been endowed by the Creator with a very wonderful nature; so wonderful, indeed, that it was said, of old, that the bees flew out of Paradise before God cursed the earth after the sin of our first parents. Thus, says the legend, they escaped the blight of sinful earth and its creatures, and are therefore the worthy symbol of the Immaculate Virgin Mary conceived without sin.

"Early Christian tradition refers to the queen bee as the only one among the animals that led a virgin life, intent only on gathering the nectar of the flowers and producing the white virgin wax and the golden translucent honey. She is the symbol of the Immaculate Mother of God, who, being a Virgin, conceived of the Holy Ghost, and gave birth to the Christ, God and man.

"The pure white wax of the Easter candle is, in that symbolism, the sign of the Body of Christ, and the wick buried in it, which is to be lit by the Paschal fire, is a token of the soul inseparably bound to the body and to be glorified by the Godhead of the Holy Trinity."

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

EARLY SWARMS.

[9266] I have just heard from my sister-in-law, Mrs. F. Cundell Blake, of Kings Worthy, Winchester, that she had a huge swarm from one of her stocks on April 25th—they came off at 10.30 a.m. I think this is rather early for this year, and perhaps you would like to note it in the BRITISH BEE JOURNAL.—A. C. BLAKE.

[9267] I have not yet seen chronicled in the BRITISH BEE JOURNAL a record of a swarm this year. I therefore write to say I had a splendid swarm on April 27. This is exceptionally early for this part, as, being a neighbour of yours, you will know. —W. EMERTON, Charlton, Luton, Beds.

[9268] On Sunday morning at 11.30, April 30th, I had a large swarm of Dutch bees from a bar-frame hive containing eleven frames.—E. LINTER, 35, Alma Road, Bournemouth.

NOSEMA APIS.

[9269] As I see in your issue of April 20th that your correspondent "Querieus" (9045, p. 127) has raised the question as to the accuracy of some statements of mine at a meeting of the Suffolk Bee-Keepers' Association, held at Ipswich, may I ask you to be so good as to allow me the opportunity of saying that the report published in your journal does not represent correctly what I said. I feel confident that I did not use the word "protoplasm," and I believe that I wrote the word "protozoön" on the blackboard. There are several other inaccuracies in the report. I endeavoured to explain that Dr. Fantham and Dr. Porter had worked out five stages of the disease, known as "Isle of Wight" disease, in the first two of which there is good reason to think bees may be cured, while the last two are invariably fatal. The report makes it appear that the statement referred to the life history of the parasite, which, as I tried to explain, passed through three stages. These and other inaccuracies in the report make me sympathise with a correspondent who wrote the other day saying, "I see you have been talking a lot of nonsense at Ipswich."—A. G. C. ROGERS.

[The report of Mr. Rogers' lecture that was sent to us was a reprint from a local paper. We noticed that all the reports in various local papers were practically the same, and therefore did not feel justified in making any alteration, and we are pleased to have the explanation from Mr. Rogers printed above.—EDS.]

"ISLE OF WIGHT" DISEASE.

[9270] Your correspondent, Herbert Patey, Chillington, Devon (9264), page 137 of last issue, asks whether there is any record of a similar disease prevalent among bees about forty years ago?

The following extract, taken from the BRITISH BEE JOURNAL, June 1st, 1879, will, I think, about hit the mark.

BEES DYING (POISONING).

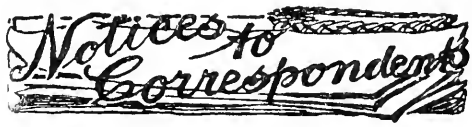
I have had a strange affair come under my notice, which is as follows:

A strong hybrid stock in my apiary daily throws out 200 or 300 bees, not dead, but unable to fly, and they crawl about in front of the hive until they die. At first I thought they were only turning out the old bees, but they are of all ages, from very old down to the youngest.

On examining them, I find they are bloated, as it were, as if they had been unable to ease themselves. I do not see how it can be put down to dysentery—the hive has been perfectly dry all the winter, and not a speck of dampness on either the quilts or combs; neither is there any stain in or about the hive as with dysentery. The brood is perfectly sound and healthy, and the young bees hatch out as in the ordinary course of things. The hive is a nine-frame Woodbury pattern, and the entrance is from three to four inches wide. It is no use returning the fallen bees, as they are turned out again immediately, and the ground in front presents a mass of crawling bees, unable to rise on the wing. The finer the day, the more turned out. They had sealed honey until the end of March, and have been fed from the middle of the same month till now with the ordinary sugar syrup. Perhaps you may be able to explain and give a remedy.—A SUBSCRIBER.

[A similar case to the above occurred some years ago, which was duly recorded in the JOURNAL. It was then supposed that the bees had access to some poisonous plant, or had partaken of food poisoned probably by accidental contamination.—EDS.]

F. KENWARD.



Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. All questions must be accompanied by the sender's name and address, not necessarily for publication, but as a guarantee of good faith. There is no fee for answering questions.

*** We should be obliged if any reader could let us know if Craggvale, Mytholmroyd, near Halifax, is a suitable district for bee-keeping.

E. C. READ (Kent).—*Freeing excluder from propolis.*—Scrape off as much as possible, being careful not to damage the excluder. Then clean with Scrubb's ammonia. As an extra precaution you might afterwards boil it for twenty minutes.

LABOURER (Driffield). — *Dealing with swarms.*—You might sell them, as there is a good demand for bees now. Do not let the bees become overcrowded at any time. If you return swarms, cut out all queen cells before doing so; or take away the old queen, and cut out all queen cells but one. The only way of trapping the queen is to use a swarm-catcher. The "Brice Swarm Catcher" is the best.

H. G. (Dorset).—It depends on the strength of the colony. A strong one may need two, or perhaps three, tiers to give them room enough to work and prevent swarming, whereas with a colony not so strong in bees, it may be a disadvantage to give more than one super.

B. M. (Grimsby).—If the eggs were laid by a worker, only drones will be produced from them. You do not say whether the capped brood was worker or drone. If drone, the queen was not mated, or the stock had been queenless for some time, and a worker was laying. If, on the other hand, it was worker brood, the queen had died, or been killed, not more than a couple of days before your examination, and in that case we should have expected to find queen cells more or less advanced.

Suspected Disease.

NOVICE (Bardon Mill), R. W. T. (Orrysdale).—It is "Isle of Wight" disease.

W. K. (Bush Hill Park).—We do not find disease in the bees sent.

C. H. (Salisbury).—We are afraid it will only be courting disaster to start again while there are infected hives in the neighbourhood. Dutch bees are very similar to natives, but are prone to excessive swarming.

"WIMBLEDON" (Surrey). — "Isle of Wight" disease. The other information would take up too much space; get the Supplement to the "Journal of the Board of Agriculture," No. 8, 1s. post free, from the Board of Agriculture, 4, Whitehall Place, London, S.W.

Will our correspondents please see that all postage is fully prepaid? We cheerfully give advice free, but we cannot afford to pay 2d. or more on underpaid letters as well, and for the future letters, or parcels, that are not sufficiently prepaid will be refused. Inland letter rates are: Not exceeding 1oz. in weight, 1d.; exceeding 1oz., but not exceeding 2oz. in weight, 2d.; for every additional 2oz. (or fraction of 2oz.), ½d.

Special Prepaid Advertisements

Two Words One Penny, minimum Sixpence.

Will advertisers please read these Rules carefully in order to save trouble, as they will in future be strictly adhered to.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not permissible at above rate, but will be inserted at* 1d. *per word as* **"Business"** *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of* 3s. *per* ¼*in., or* 5s. *per inch.*

PRIVATE ADVERTISEMENTS are only intended for readers having **Surplus Stock** *to dispose of.* **Driven bees, Nuclei,** *and* **Queens that are reared or imported for sale,** *are Trade Advertisements, and can only be accepted under trade terms.*

Advertisements must reach us NOT LATER than FIRST POST on TUESDAY MORNING for insertion in the "Journal" the same week.

Orders for three or more consecutive insertions in "The Bee Journal" entitle advertisers to one insertion in "The Bee-Keepers' Record" free of charge.

PRIVATE ADVERTISEMENTS.

WANTED at once, a strong, healthy skep of bees. Dutch preferred.—BRETT, Maybury Lodge, Woking, Surrey. v 5

SELL or exchange, Victor fretsaw, billiard table, 6ft. by 3ft., all complete; also for sale several hives and appliances; all good order. —Apply, KITCHEN, Whissendine, Oakham. v 6

QUANTITY of frames, Roots' sections, feeders, excluders, etc., at very low prices to clear. all new goods.—ALFRED W. FELL, Stone, Staffs. v 7

WANTED one or two good stocks of bees on bar frames; will exchange Rhode Island Red pullets, laying; or state lowest price.—LEWIS, Field House, Shardlow, Derby. v 8

WANTED, a straw skep of pure golden or Italian bees.—THOS. JELLINGS, 8, Stoke Green, Coventry. v 10

TWO new frame hives on legs, 10 frames each, crate of shallow drawn-out combs; 10s. 6d. each.—WEBB, 19, Gordon-road, Swindon. v 11

FOR SALE, two strong stocks bees, guaranteed healthy; also two W.B.C. hives, not used.—CARR, 12, Ednam-street, Annan. v 12

QUEEN (fertile); also early swarm wanted; preferably blacks. — THOMS, Rozelle, Paisley. v 13

GOOD honey extractor and section glazing machine or exchange for bees.—COOPER, Thorley, Isle of Wight. v 14

WANTED man over military age for light duties; 10s. per week with board, lodging and washing.—W. E. M., "B.B.J." Office, 23, Bedford-street, Strand, London, W.C.

200 SHALLOW frames, drawn out, clean, 5s. dozen, racks 1s. 3d. extra; 50 W.B.C. section racks, 1s. 3d. each, fitted complete, full sheets, foundation and separators, 3s. 9d. each; Lever honey-tins, unused, 2 dozen 14lbs., 9s. dozen; 2 dozen 28lbs., 12s. dozen. — X. Y. Z., "BEE JOURNAL," 23, Bedford Street, London, W.C.

BRITISH BEE-KEEPERS' ASSOCIATION.

The Council of the British Bee-Keepers' Association are anxious to obtain gifts of honey for the wounded soldiers in the London Hospital, where it is urgently needed both for food and medicinal purposes. They will, therefore, be grateful for gifts of same, no matter how small, from bee-keepers throughout the British Islands. It is unnecessary to explain our obligations to these brave fellows, who have sacrificed health and limbs for the sake of our country. Gifts should be sent addressed to the Secretary, B.B.K.A., 23, Bedford Street, Strand. The donors' names will be published in the "B.B.J." and RECORD.

W. HERROD-HEMPSALL,
Secretary.

HONEY FOR LONDON HOSPITAL.

Amount already received ...	240½ lbs.
S. J.	14 lbs.
Total	254½ lbs.

A ROLL OF HONOUR.

Although bee-keeping is considered a minor pursuit, we venture to say that it has provided more fighting men than the usual average of any industry. To place on record the part the members of our craft have played in the present war we propose to make a "Roll of Honour," and shall be pleased if our readers will forward us the **Names** and **Addresses**, together with the **Regiment** and **Rank**, of any bee-keeper serving his King and Country at home or abroad; also if killed or wounded.

We print a further list of names to those sent in, and shall be pleased to have other names as soon as possible.

Gunner Thomas Thompson, Hill Road, Stonehouse, Lanarkshire, 49th Co. R.G.A.

REVIEWS.

Sixth Annual Report of the State Inspector of Apiaries for 1915 (Bulletin No. 10, State Board of Agriculture, Commonwealth of Massachusetts). This is a report presented by Dr. Burton N. Gates, and describes the work done during the year. The portion of the report which particularly interests us is contained in the Appendix, pages 11 to 30, which deals with "Spraying versus Bee-keeping." The mortality among bees in the State during the seasons of 1914 and 1915 was so great that bee-keepers were much concerned over the question, and appeals for assistance were made to the State Board of Agriculture. The inspectors, too, found in their visits to the bee-keepers that colonies and apiaries were depleted, run out or ruined for the season through what was termed "spray poisoning." In reading the description of the symptoms we find them so similar to those of Isle of Wight disease that we are led to wonder if the causes may not be analogous. One man says, "About the 15th May (North Andover) I noticed the ground in front of one of my colonies covered with dead and dying bees. Upon examination I found some of the bees alive; now and then one would try to fly, but would hardly lift herself from the ground." Another says, "I had a man report that up to a week ago everything was going finely. To-day the grass for 20 feet around his hives is strewn with dead and dying. They started spraying here about a week ago... There are only a few colonies left in this neighbourhood." Nearly all the symptoms we know in connection with *Microsporidiosis* are minutely described. There are also many quotations from *Gleanings in Bee Culture*, all tending to connect the mortality with poisons. One bee-keeper who was a pharmacist made the Marsh test for arsenic on honey, with a positive reaction, but it is not stated if it has been definitely proved from chemical analysis that the losses are due entirely to poisoning, and that the bees are not affected by the same disease as we are suffering from in this country, caused by *Nosema apis*, which, however, is not mentioned in the report. It will be remembered that at one time some of our bee-keepers attributed the losses to the spraying of fruit trees, but Dr. Malden, in his report in 1909, says, "Chemical examination of the bodies of large numbers of diseased bees has failed to show the presence of either arsenic or copper" (*Journal of the Board of Agriculture*, 1909, page 813). It would be interesting to know if any search for Nosema has been made in the investigation of the great mortality in bees in Massachusetts.

Bee-keeping for the Oregon Farmer, by H. F. Wilson (Bulletin No. 168, Oregon Agricultural College, Corwallis, Oregon). The author is the State Entomologist at the Oregon Experiment Station, and has produced a capital pamphlet mainly dealing with the practical side of bee-keeping as best suited for that State. In the introductory chapter we learn that the first colonies of bees were imported from California in 1849, and were sold to local buyers at $125 (£25 13s.). Other bees were imported later, and as a result of escaping

swarms many bee trees can be found throughout the State at the present time. Many farmers keep from one to several stands for home use; and in all parts of the State one may find from a few to many colonies that not only furnish honey for the home, but also give a market surplus. The U.S. Census Report for 1910, with a distribution map of the State, shows a total of 50,000 colonies. Taking the whole State, individual apiaries produce from a few pounds to a carload—a carload is about 40,000 pounds. The number of colonies owned by individual bee-keepers varies from a few to six or seven hundred. In addition to honey-producing apiaries there are situated in different points in the State several queen- and bee-raising apiaries. In some districts many colonies of bees are barely self-supporting, and their only value is in pollinizing the fruit blossom. In the coast division some of the finest honey is produced, but there are no large apiaries, and the average surplus is small, obtained in sections which have only a local sale, the demand for them being greater than the supply. Continued rains in spring have to be contended with and oftentimes the blossoming period of the principal honey-producing plants passes without the bees being able to spend more than a few days storing honey. In some parts of Oregon alfalfa is grown extensively for seed, and it is in such places that the large apiaries are established, where honey is produced in marketable quantities. The pamphlet is well illustrated and in it will be found much that is useful.

ANCIENT BEE LITERATURE.

IV.—Gods and Bees—(*Continued*).

"Above all venerate the gods," sung Virgil nearly 2,000 years ago, "and renew to Ceres the sacred annual rites, offering up to her your sacrifices. For you let the rural youths adore the goddess in honour of whom mix the honey-comb with milk and mild wine." At the end of the honey harvest the gods had to be propitiated by an offering of the fruits of the hives. In arranging the plan and scope of his Georgics, Virgil invokes the aid and sympathy of the gods and goddesses, especially of those who had charge of fruit and flowers, and whose care it was to guard the fields and their produce. He directly names Ceres, Bacchus, Pan, Apollo, Minerva, and Jupiter, the last of whom, he tells us, "shook the honey from the leaves." The bee, he says, is a very small creature in size, but not small in renown. If the deities permitted he would show this, and he did, but only by the grace and help of the gods. Bees, he says, possess a portion of, or an emanation from, the divine intelligence ("portions of etherial thought"). For them there is no place for death, but they soar each as a star and mount to high heaven. It is to be presumed that after reincarnation they reappear again as bees or something higher. Indeed, other writers tell us they do.

Jupiter conferred on bees an extra gift, that they alone should share the buildings of their city, all with equal rights; and that they should pass their lives under inviolable laws, and they alone know what means settled "household gods." "Neither do bees indulge in conjugal intercourse, nor relax and effeminate their bodies in love, nor bring forth their young with throes of travail." They are weather-wise in their generation, and "do not remove themselves to a great distance from their abode when rain impends, or trust the sky when east winds approach, and they attempt but short excursions when the weather is unsettled."

Thyme is a favoured food of the bees, and the altars of the gods were often decked with festoons of this honey-yielding flower. Cybele, the mother of the gods, aided the bee-keeper in hiving his swarms: "Ring bells and beat around the cymbals of mother Cybele." The very creation of bees is ascribed to the gods. "What god, ye muses, what god, devised for us this art?" Then we have an answer: "Erect four altars beside the lofty temple of the goddess." In due time: "Bees humming burst forth and float away in enormous clouds; they swarm on the tree-top and cluster in a grape-like cluster on the bending boughs." The remains of the four oxen sacrificed generated these bees!

The libations to the gods were made in many forms, but of these, perhaps, honey was the most acceptable and the most honoured. Euripides tells us of "milk, the grapes' rich juice, and mixed with these the labour of the yellow bee." The graves of the dead were smeared with honey. "The shepherds there the yellow honey shed." A dead body had a libation poured out to it. "Delicious milk, liquid honey, extracts of flowers." Even the underworld deities had honey poured out to them. "Milk and honey first, and next rich wine, and lastly water." "The luscious offering of the honey-comb" was a common "gift to the gods," no similar offering being in the hands of mortals to offer.

As in European countries, so in the East, bee-keeping was an important industry, because honey was required not only as a household luxury or food, but also as an offering to their gods. In Hindu literature the bee is very fre-

quently associated with the gods and demi-gods. Festivals, and especially sacrificial offerings and others received gifts of honey.

Vishnu was the chief god, and by him all things were created. One of his names is a word meaning honey. At times he is represented as a bee lying in a flower. Being the god of the sun and the moon he is regarded as the provider and dispenser of honey. Krishna and Bramah, in the flowery language of the East, are said to be "born of honey." Kama, too, as we have seen when dealing with the eastern god of love, was specially fond of bees and honey.

One feels reluctant to leave the subject of ancient gods, so full of interest is it, even when they are not connected directly with apiculture. The silver-tongued Virgil, sung of by Tennyson, "Thou that singest wheat and woodland, tilth and vineyard, *hive* and horse and herd," had a great reverence and veneration for the gods. His Æneid is full of them. The influence of Minerva pervades the whole history of the fall of Troy. The Greeks by the inspiration of Minerva built the monstrous horse. Æneas was constrained by the order of the gods to fulfil his destiny. At first the note was joyous: "We wreath with garlands the temples of our gods." Then old Priam asserts: "I hold the gods to blame—not Helen." Simon enters and pleads: "By the gods have mercy." The evil being wrought the gods suffered: "The gods have deserted us." "The mighty gods were hostile to Troy." "It is the anger of the gods that is laying Troy low." "All resistance is vain now that the gods are arranged against Troy." Æneas decides: "I will follow the gods of my country," and he leaves Troy. "Constrained by the orders of the gods to fulfil his destiny," he makes for Rome, which place is later declared to be "the special care of the gods."

Current literature has much also to say of the gods: "A daughter of the gods, divinely tall and most divinely fair." "Her movements were Diana-like," represents very high praise of women. The familiar "By Jove!" reminds us of Jupiter. The following are as "household words": "At peace with gods and men." "As gods knowing good and evil." "As nectar fit for the gods." "Whom the gods love die young." "They worship the god Mammon." "It lies in the lap of the gods." "They bowed before it as an edict of the gods." "She reared an altar unto an unknown god." "An ill-starred honeymoon."

The writer recently read a work of fiction by a well-known author, and in its 300 pages made marginal notes of over fifty references to "gods and goddesses." As they do not directly relate to either bees or honey, only a very few brief specimens will be given: "The heroic ages when gods were worshipped." "The British Bona Dea—Mrs. Grundy." "She did decorous worship to her god, Propriety, in the sight of others." "No human mind is entirely god-like." "She moved with the grace of a goddess." "Danae saw, heard, felt Jupiter through a golden shower." "His dinners were as the banquets of the gods." "He adored his goddess." "He began to think that Minerva, like Jove, sometimes nodded."

Next contribution will deal with goddesses.

M.

BLURTS FROM A SCRATCHY PEN.

QUAINT EXTRACTS FROM OLD WRITERS.

In connection with the extract from the *Catholic Fireside*, sent by Mr. F. de Silva, and appearing in last week's edition of the BRITISH BEE JOURNAL, under the title of "The Paschal Candle," the following, which I have copied from the Gelasian Sacramentary, may be interesting. It occurs in the rite of the blessing of the Paschal Candle.

And—because it is not everyone's good fortune to be in touch with these antiquities—let me explain the Gelasian Sacramentary.

A Sacramentary was the book of the rites of the Church of those days. The celebrant being presumed to be a Bishop, it was more compendious than the "Missale Romanum," as containing the offices for all occasions.

This Gelasian Sacramentary was written in the seventh, or early eighth, century, in the time of Charles Martel, and was for the use of "The Abbaye of St. Denis at Paris." The original is in the Vatican library. A copy of it, however, may be found in "Duchesne's Christian Worship: Its Origin and Evolution." Since the extract, as given below, was copied and translated, I have found a more lengthy "rite" of a later period for the same occasion, which is even more fully laudatory of bees and their products, but as this was only recently met with by the writer, there has not been opportunity to offer it to your readers. It is so interesting, as showing the conception of the bee life, and habits of bees, at that early date (although we nowadays can see the errors in natural history), that I make no excuse for offering it. It is as follows:—

"But the bees are moderate in their feasts, in procreation most chaste. They build little cells, fashioned from a waxy liquid of which human skill, with the help of art, is not equal to. They gather

from the flowers, and yet no damage is inflicted on the flowers. They bring not forth young, but carrying in their mouth the progeny conceived, they return to their hives as in wonderful example Christ proceeded from the mouth of the Father. With these virginity is fertile without bearing child."

To make comment on the above would be to spoil it.

Among my other curiosities of bee literature, which from time to time I have stored away in my notebook, I find the following from the Koran. I doubt if it has appeared in the JOURNAL before:—

"The Lord spoke by inspiration to the bee, saying: 'Provide thee houses in the mountains, and in the trees, and of those materials wherewith men build houses for thee. Then eat of every kind of fruit, and walk in the beaten paths of the Lord.' There proceeds from their bellies a liquid of various colour which is a medicine for man."—The Koran, Chapter 16.

Mahomet took much from the Scriptures. We find that he honours the Patriarchs, but this is a corroboration of bee-keeping as mentioned in Holy Writ, where the "wild honey" and the "honey from the rocks" is so often alluded to.

Having given these excerpts from Christian and Turk, it is only fair that I should put the Pagan under contribution also, not for his theology, but for his customs. Herodotus has a considerable deal to say about bees and honey, but I must say it gave me something of a staggerer when I read in his Ninth Book:—

"The Babylonians bury their dead in honey."

I could not realise the vastness of the subject all at once. Of course, their idea must have been to preserve from decomposition. Well, we all know that fruits preserved in honey are most delicious, and I used to know an old lady cook, one who was celebrated for her tasty home-cured hams. She had a "secret" which I never could get at, but I am almost certain that that secret was honey. There were no hams like her curing.

Evidently the Babylonians were no fools in their day. They had learned the trick. I presume this to have been their line of argument, or rather their *modus operandi*, in embalming a departed Babylonian:—First souse him well, again and again, in liquid honey, even as candlemakers do with their wicks, then lay him aside until he granulates. The embalmment would be perfect—and how cheap! Compare the economy of the cost as against bitumen, aloes, and the other ingredients which the Egyptians used for the mummy of a big swell. Of course, the value of honey would rise. All the better for bee-keepers. They were giants in those days, 8 ft. or 9 ft. in height, and, say, 20 st. to 30 st. in weight was quite an average. What size mummy-case or sarcophagus would he require, taking into consideration the envelopment of honey. As I have said, the subject is too vast to be discussed in our JOURNAL. Fancy the possibilities of honey required, say, after a great battle, it is too enormous.—J. SMALLWOOD.

ECHOES FROM THE HIVES.

EXTRACTING HONEY IN EASTER WEEK.

Now the long and dreary winter months have passed away again and the earth is gladdened with spring and sunshine, the birds are singing their songs of thankfulness in the twilight of the early morning, and the nightingales are warbling at night in the valley near the babbling brooks, whose banks are covered with beautiful wild flowers of various tints, so wonderfully designed by the hand of Nature. The beekeepers (who are generally lovers of rural nature) in many instances this year have sad hearts, with all the glories of spring, the musical hum of the honey bee (which is looked forward to most of all) has ceased to exist. Therefore to those beekeepers the sunshine and flowers seem to lose their usual natural charm. There are very few bees left in this part of Shropshire. Old boxes, and skeps, and modern frame hives have nearly all gone the same way. But I am thankful to be able to say that personally I have got thirteen stocks, which appear at present in splendid condition. I have recently had an outbreak of "Isle of Wight" disease, and as soon as I noticed the signs I immediately destroyed the affected stocks. I said in my last notes to the BRITISH BEEKEEPERS' JOURNAL that I had packed fourteen stocks for winter, with supers in position, viz., one rack of shallow frames. I examined my stocks in Easter week and found all the hives with the bees at work in the supers. I had to extract honey in order to give the bees room for the first flow, which all the stocks are ready to take full advantage of. So at Easter I extracted about 20 lbs. of honey. I gave the spring cleaning and placed excluders between brood nest and super, and also placed on a second rack, as I expect to be away from home for some time. I quite expect to lose my bees in the course of time, but I am looking forward to having a bumping season in the meantime. I hope that the experiments which are to be carried out in different parts of the country will prove a true cure, and in conclusion wish the BRITISH BEEKEEPERS' JOURNAL and its readers every success.

W. SHUKER, Middleton Scriven,
Nr. Bridgnorth, Shropshire.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

BEE-KEEPING EXPERIENCES.

[9271] The BRITISH BEE JOURNAL says that it would like to have the experiences of some of its readers with bees, so I will relate mine, which, though they cannot instruct, may still amuse some bee-keepers. Looking carelessly through the *Daily Mail* in June, 1914, I read that that paper was offering a hive of bees to any Norfolk cottager whose annual rental was less than £12. I always had a hankering after bees ever since the days of my childhood, when, as a punishment for idleness, I was made to learn and repeat, "How doth the little busy bee," etc. As my yearly rental is only assessed at £6 I saw no reason why I should not apply for a hive. I did so, and a few days later I received a form to fill up, which had afterwards to be signed by the clergyman of the parish, who testified that I was a fit and proper person to make the application. After two weeks I got notice that a hive had been sent to A—— station, and that the bees would follow two days later. And so they did, the late Dr. Wardlesworth, the famous bee-man, bringing them himself. The hive I had placed in a convenient spot in the garden, and the doctor followed me there, carrying a skep of Dutch bees, which he said had only arrived from Holland the day before. He shook some bees out of the skep, saying, "Do you see them?" I certainly did, and moved quickly to a distance. The doctor took off the cover of the bar-frame hive, and placed the skep upon it, telling me to cover it up warmly for the night, and in the morning to drive the bees into the hive. Then the doctor drove away with his motor full of Dutch skeps, which he was taking to people in the neighbouring villages, and I was left alone with my bees, and dismayed by the thought of having to "drive" them in the morning.

The morning came, and the first thing I did was to look at the hive; there I found the bees already at work, busily coming out and going in at the entrance of the hive. I ventured too near and got stung on the cheek, so I thought that it would be safer and wiser in every way to leave the bees to themselves, and let them work their way down into the hive without any help from me. Then I got the "Bee-keepers' Guide Book," and when I read what was meant by driving, I was firmly convinced that it would be better not to interfere with the bees in any way. The month of September came, the bees were working industriously, but still the tall Dutch skep was on the top of the frames, the lid of the hive crowning its summit, and I had not the courage to lift the skep off and see if the bees had all gone below. Fortunately, I heard of a bee-man in the neighbourhood, not a "skeppist," but a "bar-frame man." This man I asked to come and examine my bees and give me some lessons in bee-keeping. He came, drove the bees from the Dutch skep into another one, and then threw them down upon a sheet which he had spread before the hive, and the bees immediately began to enter it. Out of the skep the bee-man took nearly 20lbs. of honey, and the frames in the brood chamber were also well filled These he left for the bees' winter food. Then came the spring of 1915, and according to my instructions I made candy and fed the bees, and continued feeding until April. Now in this village there are six people who keep bees in straw skeps, old people, who look upon bar-frame hives "as nothing better than cold barns," as one of them remarked to me. About this time these people were most anxious to know if my bees were alive, for they told me that on looking into their skeps they found all their bees dead, although the skeps were full of honey. In some of the skeps there was not a single bee, dead or alive. This was the first time in their experience that such a thing had happened. The old skeppists found it strange that in the "cold barn" my bees had survived the winter. I was very glad when I saw my bees busy among the crocuses. In the month of May I was advised to be on the lookout for swarms. I had never seen a swarm of bees, and was anxiously awaiting the event. Coming home from my work one afternoon I was met by the news that all my bees were "out." There, sure enough, at the topmost branch of a "London Market" apple tree hung an immense swarm of bees. How was it to be got down? With fair words and the offer of a substantial reward I induced an old fellow to borrow a ladder and get the swarm down before it took flight. This

old man had formerly kept bees in skeps which he made himself. "No bees could have a healthier home than a straw skep," he often remarked, when we were having a bee talk. Before he began his ascent up the ladder I had to fetch him twelve black currant leaves, a large bunch of nettles, and a bucket of water. With the currant leaves he rubbed well the inside of the skep, the nettles he dipped in the water, then up the ladder he went, and was soon down again with the skep full of bees. The wet nettles the old fellow hung on the branch where the swarm had been, "to prevent them," he said, "from going back again." Several old hives had been given to me, and these I had painted, mended, and fitted up with frames of wired foundation. In the evening, having donned a bee bonnet and put on a pair of woollen gloves, I went bravely to work to drive the bees into their new home. I took up the skep carefully and threw down the bees upon the sheet before the hive. To my joy that great crowd of bees was soon on the march to the entrance; it was quite delightful to see them.

(To be continued.)

WEATHER REPORT.

WESTBOURNE, SUSSEX.

APRIL, 1916.

Rainfall, 1.04in.	Minimum on grass, 24 on 16th.
Below aver., .73in.	Frosty nights, 7.
Heaviest fall .23, on 16th.	Mean maximum, 56.1.
Rain fell on 14 days.	Mean minimum, 38.4.
Sunshine, 221.5 hrs.	Mean temperature, 47.2.
Above aver., 30.9 hrs.	Above average, 1.0.
Brightest day, 29th, 13.6 hrs.	Maximum barometer, 30.322 on 1st.
Sunless days, 1.	Minimum barometer, 29.249 on 20th.
Maximum temperature, 75 on 27th.	L. B. BIRKETT.
Minimum temperature, 30 on 16th.	

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices (not exceeding 7 lines) in this column, 10 lines charged 3s. 6d., up to 15 lines 5s., which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

June 27th to July 1st, at Manchester.—Royal Agricultural Society's Show. Bee and Honey Section, under the direction of the B.B.K.A. Prizes arranged in groups of counties for Associations affiliated to the B.B.K.A. Schedules from The Secretary, 25, Bedford Street, Strand, W.C. **Entries close May 29th.**

Notices to Correspondents

Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. All questions must be accompanied by the sender's name and address, not necessarily for publication, but as a guarantee of good faith. There is no fee for answering questions.

RADNORIAN (Radnorshire).—*Killing Bees.*—If the "squibs" do not answer try the following method: Melt some sulphur in an iron pot; this is better done out of doors and on a clear fire, as the melted sulphur ignites very easily. Dip some pieces of brown paper of a convenient size for the purpose—say about 3in. square—in the sulphur. On becoming cold the sulphur sets again. Make up a smoker cartridge by rolling up some of the sulphur-coated paper with corrugated paper, light and place in the smoker in the usual way. Close up the entrance of the hive, insert the nozzle of the smoker under the quilt, and blow the sulphur fumes in until the bees are dead. There is no objection to painting inside the roof and the outside of body boxes.

H. M. EGGAR (Chard).—The wasps were queens. There are no other wasps than queens flying at present, and on warm days they are now searching for suitable nesting places. The large wasps you saw in the autumn were also queens looking for snug winter quarters in which to hibernate. If every queen wasp that survived the winter succeeded in establishing a "vespiary" we should indeed be afflicted with a plague of wasps. Fortunately, they have a number of enemies and only comparatively few queens succeed in building nests.

Suspected Disease.

G. B. POTTS (Durham).—The bees were too dry for diagnosis. It would be safer not to use the combs again.

Special Prepaid Advertisements

Two Words One Penny, minimum Sixpence.

Wild advertisers please read these Rules carefully in order to save trouble, as they will in future be strictly adhered to.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not permissible at above rate, but will be inserted at* 1d. *per word as* **"Business"** *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of* 3s. *per* ½*in., or* 5s. *per inch.*

PRIVATE ADVERTISEMENTS are only intended for readers having **Surplus Stock** *to dispose of.* **Driven bees, Nuclei,** *and* **Queens that are reared or imported for sale,** *are Trade Advertisements, and can only be accepted under trade terms.*

Advertisements must reach us NOT LATER than FIRST POST on TUESDAY MORNING for insertion in the "Journal" the same week.

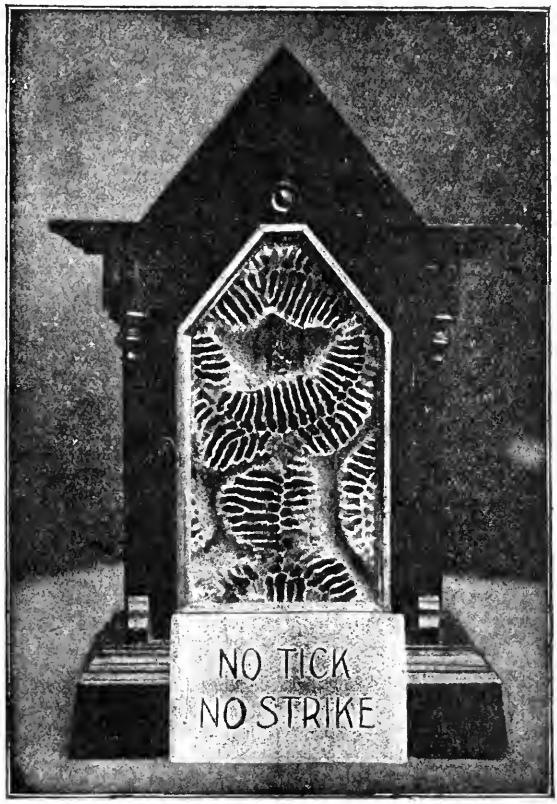
Orders for three or more consecutive insertions in "The Bee Journal" entitle advertisers to one insertion in "The Bee-Keepers' Record" free of charge.

PRIVATE ADVERTISEMENTS.

MR. D. HANCOX has received so many inquiries from would-be purchasers of bees that he is unable to supply all, or to reply to the numerous letters, and takes this opportunity of thanking those who have written.

PHOTOGRAPH of Comb in clock-case from which 7 lbs. of Honey was extracted. Seventy pounds were abstracted from the hive also. These Bees were badly affected by "Isle of Wight" Disease and treated by M. C. Pay of Croydon, and cured by IZAL washing, spraying and Izalized food. He had the hive given to him to be destroyed, May 24th, 1912, on which day he began his treatment.

"In IZAL they had placed in their hands a worthy and formidable weapon for battling against the bacillus."—*Sir James Crichton-Browne, F.R.S.*



IZAL is supplied by Royal Warrant to H.M. The King.

2 Teaspoonfuls Izal Fluid to 1 gallon of water for washing and spraying New Queen Bee inserted on June 12th, 1912.

In September 77 lbs. Honey taken from them. At present, June, 1915 descendants of the original diseased bees are quite healthy.

IZAL

is a Reliable Remedy against Foul Brood.

Sold Everywhere in Bottles, **6d.** & **1/-** each.

Ask for full details of IZAL treatment sent post free by

Newton, Chambers & Co., Ltd., Thorncliffe, nr. Sheffield.

COLONIAL HEATHER(?) HONEY.

A great deal has been said about New Zealand honey sold in this country, but our Colonial cousins are not particular as to the methods adopted to obtain sales, as the following paragraph, taken from a report signed by Major Norton, the New Zealand Commissioner in this country, sent out to New Zealand, and which appears in the *New Zealand Bee-keepers' Journal* for February 18, 1916, shows:—

"Another advantage of our methods of distribution is that we are able to dispense with all classes of honey providing it is in sound condition. For instance, if you ship your dark honey to London, you will find it altogether unsaleable. We, however, have a market by putting it up into vessels and labelling it 'Heather' that will take all you can send. In Bristol, for instance, where we have the honey now in more than 100 grocers' shops, they want nothing but white honey. In the Midlands they like the light amber; but in Cumberland and north of that the dark heather honey is preferred, and necessarily we arrange our supplies in such a way that we cater for all."

BRITISH BEE-KEEPERS' ASSOCIATION.

The Council of the British Bee-Keepers' Association are anxious to obtain gifts of honey for the wounded soldiers in the London Hospital, where it is urgently needed both for food and medicinal purposes. They will, therefore, be grateful for gifts of same, no matter how small, from bee-keepers throughout the British Islands. It is unnecessary to explain our obligations to these brave fellows, who have sacrificed health and limbs for the sake of our country. Gifts should be sent addressed to the Secretary, B.B.K.A., 23, Bedford Street, Strand. The donors' names will be published in the "B.B.J." and RECORD.

W. HERROD-HEMPSALL,
Secretary.

HONEY FOR LONDON HOSPITAL.

Amount already received ... 254½ lbs.

ERRATUM.

In our report of the British Bee-keepers' Association Council meeting, page 139, May 4th, the bank balance for February should be £170 14s. 1d.

A ROLL OF HONOUR.

Although bee-keeping is considered a minor pursuit, we venture to say that it has provided more fighting men than the usual average of any industry. To place on record the part the members of our craft have played in the present war we propose to make a "Roll of Honour," and shall be pleased if our readers will forward us the Names and Addresses, together with the Regiment and Rank, of any bee-keeper serving his King and Country at home or abroad; also if killed or wounded.

We print a further list of names to those sent in, and shall be pleased to have other names as soon as possible.

Lieut. G. B. Ash, Morcot, Bushey Heath. —R.A.M.C.

REVIEW.

Jahresbericht über die Faulbrut versicherung des Vereins schweitzer Bienenfreunde pro 1915, by Fr. Leuenberger, Bern.—This is the report for 1915 respecting the work carried on against foul brood, and shows not only the value of inspectors but also legislation, for the results attained could never have been obtained without it. The number of compulsorily insured members of the Association has risen to 9,224, and the number of colonies insured was 118,910. It is satisfactory to read that the number of cases of foul brood had enormously decreased, and there were only 47 apiaries affected during the whole year, the average for previous years being 107. From 131 in 1908 (11 per cent.) foul brood had gradually diminished to a minimum last year of 4 per cent. of the insured colonies. Compensation paid only amounted to 1595.95 francs, the lowest since compulsory inspection was instituted. In eleven cantons foul brood has been entirely exterminated, and there was not a single case last year. In cantons Bale and Thurgovie it has been reduced to the insignificant figure of 0.2 per cent., in Argovie to 0.3 per cent., Berne to 0.6 per cent., and Lucern 0.9 per cent. In all these five cantons it is less than 1 per cent. Valais has always been one of the most infected cantons and still shows 5.2 per cent., the largest of any, and this is accounted for by the fact that foul brood in that canton, owing to no measures being taken to combat it, had become endemic. It was hoped two years ago that by a systematic visit to every apiary, and the destruction of the nests of infection, foul brood in this canton would also have been exterminated by this time, but the outbreak of war and consequent reduction of the cantonal Government grant has restricted operations. As bee-keeping in Valais is of considerable importance, it is

hoped that bee-keepers will press the authorities to increase the grants so that the canton may enjoy the same immunity from disease, as is the case in other cantons. In the forty-seven apiaries in which foul brood was found 113 stocks were affected. In twenty-seven cases only one stock was affected. In fifteen apiaries one-third of the colonies were diseased. In the two worst apiaries there were eleven and seventeen affected colonies, both belonging to bee-keepers on military service, who had been called out in consequence of the mobilization of the army, and there was no one to look after the bees. In the treatment artificial swarms were made in thirty-eight cases and seventy-five colonies were destroyed. In all cases, infected combs were either melted or burned, and hives disinfected by burning out.

Diagnosis of the disease at the Bacteriological Laboratory at Liebefeld showed that thirty-six cases were of virulent or odourless foul brood (*Bacillus Burri*), and eleven were due to strong smelling foul brood (*B. alvei*) associated with sour brood (*Streptococcus apis*). It is stated that in America there is another brood disease which is often confounded with the above. It was formerly named "black brood," but latterly owing to some misunderstanding the name of "European foul brood" has been given it, although, as the author of this report points out, we know nothing of the disease in Europe, from the description the Americans give of it. It is stated to be due to the recently discovered *B. pluton*. The diseased larvæ assume a greyish-black colour and are not stringy. The remedy is to remove the queen, and when all the brood has emerged to introduce another queen. It is the same plan that is adopted with good results in cases of "dead brood free from bacteria" which have occurred from time to time.

We can congratulate the Swiss bee-keepers on what the Association has been able to accomplish with the powers which legislation gives them. It certainly is a contrast to the selfish spirit displayed by a few bee-keepers in this country, who have not only been able to hinder legislation, which would have been a boon to thousands of those engaged in the industry, but have, by their opposition, promoted the spread of disease.

REPORT ON THE WINTERING OF BEES IN ONTARIO.

By Morley Pettit,
Provincial Apiarist, Guelph, Ont.

Up to the present date, April 20, about 700 persons keeping 20,000 colonies of bees have reported a winter loss of about 13 per cent. The loss was largely due to starving, owing partly to an insufficient supply of stores on account of the high price of sugar, and partly to a mild spell in January, which caused the bees to rear brood and draw heavily on their stores. The few warm days early in April gave the bees a splendid cleansing flight, and their general condition now is reported as very good. Few really heavy losses have been reported from extensive bee-keepers. More report forms than ever have been returned marked "Not a bee-keeper." These are mostly from the smaller bee-keepers, who are finding that specialisation pays best. It is an indication that the industry is getting on a better business basis from year to year.

Clover prospects seem very good throughout the Province. The latter part of the season of 1915 being wet gave the new seeding an excellent start, and the scarcity of farm labour has increased the acreage seeded down. On the whole, present indications are for a good season, and bee-keepers are even more optimistic than usual.

CRAYFORD AND DISTRICT BEE-KEEPERS' ASSOCIATION.

SUMMER PROGRAMME, 1916.

May 27th (Saturday afternoon). At Mr. Shaw's Apiary, New Eltham, 4 p.m. Queen-Rearing Demonstration. Admission by ticket only. Apply to the Hon. Secretary.

June 17th (Saturday afternoon). At Association's Apiary, Maypole House, Dartford Heath, 4 p.m. Lecture and Demonstration by Mr. W. Herrod-Hempsall.

July 15th (Saturday afternoon). At Mr. Paulin's Apiary, "Brackenhurst," Dartford Heath, 4 p.m. ("Brackenhurst adjoins the apiary at Maypole House—two minutes from Bexley Asylum, main entrance).

August 26th (Saturday). Annual Honey Show at Maypole House. (Further announcements to follow).

Members are invited to bring friends to all lectures, with the exception of the demonstration on May 27th.

Members who desire to undergo examination for the B.B.K.A. Preliminary Certificate of Proficiency in Bee-Keeping, which is to be held at Maypole House Apiary on June 17th next, should apply to the Hon. Secretary for particulars.

The Council have decided to issue an Association Honey Label for the exclusive use of members. The labels will be purchased wholesale, and sold to members at approximately cost price. To assist in the production of a suitable design members are invited to submit sample labels, or preferably, original designs for consideration. Such help would be greatly appreciated.—G. W. JUDGE, Hon. Sec.

HELPFUL HINTS FOR NOVICES.

By W. Herrod-Hempsall.

QUEEN-REARING AND INTRODUCTION.

(Continued from page 142.)

As the queens become fertilised and are removed for selling or introducing to other colonies, a virgin can be introduced by means of a cage, as seen Fig. 70. This illustration also shows the combs arranged on the lid, or if both combs are fully built it can be pushed in between the combs, as shown Fig. 71.

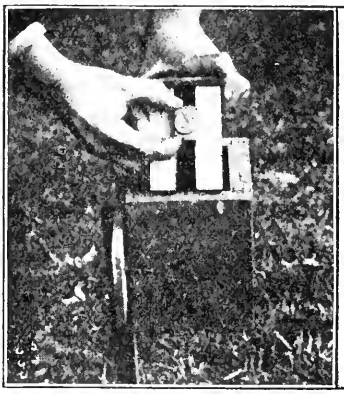


FIG. 71.

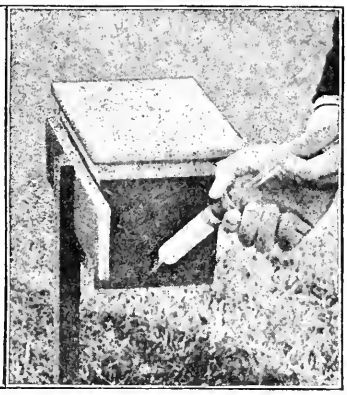


FIG. 72.

It will be necessary to feed the bees at times. This is done by syringing syrup in at the entrance with a glass syringe, Fig. 72. The syringe can be obtained from

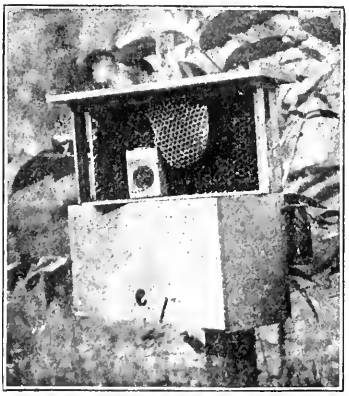


FIG. 70.

FIG. 74.

any chemist. The wax painting prevents the syrup soaking into the wood, and the bees soon take it up.

The fertilisation of as many as twelve queens can be obtained in one of these baby nucleus hives in a season.

In America the boxes are made of material only ⅜in. thick, but in this country I have found this is not sufficient. Also I make a flanged lid in addition to the ordinary one, the inside of which is lined with felt. Our Baby Nucleus Apiary at Luton is shown at Fig. 73, while one of Mr. Pratt's, in America, containing 300 baby nuclei on the ground, is seen at Fig. 74.

It will be found at times that the bees will swarm out with the virgin when she takes her wedding flight, but the percentage of those so doing is not great.

It is astonishing the amount of work these small lots of bees will do in a good season. We had one from which three completed sections were removed in addition to obtaining the fertilization of thirteen queens.

Fig. 73.

The population can be kept going from the eggs laid by the queen after mating before her removal.

At the end of the season these miniature hives are brought close together gradually, all the bees united on proper brood combs and fed down for wintering.

(*To be continued.*)

CORRESPONDENCE.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

BEE-KEEPING EXPERIENCES.

(*Continued from page* 150.)

After this four more swarms came out, were caught and put into new homes, and everything seemed to be going on well. I started to make a calculation as to how much money I should be able to obtain from my coming honey-harvest. Five strong colonies of bees, all healthy and industrious! I was not at this time sewing shirts for soldiers, but knitting mufflers for them in view of the coming winter, and many a pleasant summer afternoon I spent, seated near my immature apiary, clicking the knitting needles to the humming and buzzing of the bees. They seemed to know that I had nothing but friendly feelings towards them, and never a sting did I get the whole summer through. I was the only person in the village who had bees, and several times one or another of the villagers would say to me, "Your bees are working well, Miss; they were all about my old skeps this morning, carrying off all they could get." Towards the end of August I noticed that there was something wrong

with my bees. They gathered in little heaps on the alighting board, fell down upon the grass, and appeared incapable of flight. All the hives were affected in the same manner. I consulted my "Guide Book," and felt sure that my poor bees must have the "Isle of Wight" disease, and this was the result of visiting the skeps of the villagers. I collected a few live bees and drones, packed them up carefully, and sent them for inspection to the Board of Agriculture. In a few days I heard from the Board that the bees were really suffering from this dreaded disease, but that there was a possibility of saving them. A drug was sent, which I was to mix with their food, lime was to be put about the hives, all dead bees burnt, also the coverings. All these directions I followed; the bees appeared to improve for a week or so, and then rapidly got worse. And now came hornets and wasps in hordes, and my poor bees were too weak to put up any fight; the wasps went in and out of the hives as though the places belonged to them. All I could do was to catch a few of the "gelbe Uhlans" in a butterfly net, and entice them to their destruction by placing bottles, which contained a little Eiffel Tower lemonade, near the hives. Every day I got a bottle full of the yellow thieves, but what was that? Still they came, and in the end they had cleared out two hives of all the honey they contained, and left just a handful of bees in a corner of the hive. Finally I decided to destroy the bees in two hives and give those in the *Daily Mail* hive a chance to live through the winter. This hive is in a different part of the orchard and at a considerable distance from the others, and there were fewer "crawlers" about this hive. With the smoker I subdued the bees, shook the combs free of them, put burning sulphur in the hives, and left them, with a heavy heart, to their fate. I did not go near the hives for four days, and when I did go and looked in and saw all the dear little bees dead, I felt too sad for words. The honey I took amounted to nearly 30 lbs. To-day is the last day of the year 1915, and the bees in the *Daily Mail* hive are still alive, and I am feeding them with medicated candy. I am hoping that they will still be alive when the crocus blooms, for when the summer comes I shall not like to miss the humming and buzzing of the bees.—HARRIETTE ANNIE HOPKINS.

May I add that, since writing the above, the *Daily Mail* Dutch bees which I did not destroy, but dosed with a drug sent to me from the Board of Agriculture, have come well through the winter, are working well, and appear to be strong and healthy. —H. A. H.

EXPERIENCES WITH "ISLE OF WIGHT" DISEASE.

[9272] I have read with melancholy interest the recent correspondence in your columns relating to "Isle of Wight" disease. My own experience as a novice has been disastrous, but it may be worth while to put the facts on record so that those who are working scientifically at the problem may have available evidence of a sufficiently varied character to enable them to form right judgments as to the cause of the disease, and so eventually, we may hope, to find a remedy.

I commenced last spring with one strong, healthy stock of Blacks, in a district where, so far as I know, there have been no bees kept for years within a radius of four or five miles. In June I had the satisfaction of hiving a 5 lb. swarm; and up to this point, and for some time afterwards, the bees were apparently quite healthy with both hives working well. Then came weeks of cold, wet, cheerless weather, and early in September, during a spell of warm sunny weather, the swarm succumbed to a virulent attack of "Isle of Wight" disease. The dead bees were carefully picked from the ground, and, together with the combs and blankets and those bees remaining in the hive, were burned, the hive being immediately scalded with hot water and disinfected. The ground occupied by the hives was also sprayed several times with a solution of carbolic acid; also the remaining hive, especially the alighting board.

At this time the original stock showed no signs of infection, so early in October they were fed up with medicated syrup, which they took down readily and filled and sealed their combs. Towards the end of the month they were closed down for the winter, but as a measure of precaution before doing so the bees and combs were sprayed on two or three occasions with the Gelston cure, this treatment being only discontinued on account of the approach of colder weather. So far nothing wrong had been detected, though careful watch was kept for the least appearance of evil.

November brought severe frost, and one day during its continuance about two or three hundred bees were observed lying dead, some on the alighting board, but the majority on the ground before it. Afterwards, on two or three occasions, about an equal number were raked out of the entrance from the floor of the hive. Then the mortality ceased, and no more bees either dead or alive were seen outside the hive. Christmas Day being mild was the first occasion on which I ventured to remove the cover of the hive and peep at the box of candy I had left over the feeding hole in the quilt. To my intense satisfaction I noticed that the bees had eaten partially through to the glass, so that I could

perceive a number of bees moving about underneath. Still feeling uneasy, however, I had another peep about the middle of January, but as there were no signs of life under the glass, and the hive was quite cold and damp, my suspicions led me to investigate more thoroughly, with the result that none but dead bees were found in the hive, and bees and combs in a sticky, mouldy condition. I am of opinion now that the live bees seen on Christmas Day were the last survivors of a strong stock. There were thousands of dead bees in the hive when opened.

I may add in conclusion that from the very commencement I have always had balls of naphthalene in the hives, and before losing the swarm had commenced to use Apicure as well, two pieces of each in each hive.—Yours faithfully, W. JONES BROWN, Middleton, Lancs.

SOMEWHERE IN FRANCE.

[9273] It is now several months since I wrote my last notes to our old paper, the BRITISH BEE JOURNAL; several months have also elapsed since I saw a copy of this interesting and instructive little journal. But *après la guerre fini*—as everyone says out here—when I get back, will mean many pleasant hours for me, reading up all that has taken place during my absence; also studying the new ideas and improvements that have been brought to light for the benefit of all those concerned in the apicultural world.

I hope to find, when I get back to England to make a fresh start, that a cure has been found for the "protozoal parasite"—better known perhaps as the "Isle of Wight" disease, which has been emptying the hives of England north, south, east and west for many years past.

We must all live and hope that Dr. Porter will finally achieve a triumphant victory over the murderous and ravenous enemy—"Isle of Wight" disease.

I do not know how things are looking in England just now, for I have not been there for several months; but here—in Flanders—the trees and hedges are now quite green, garden crops are well out of the ground, fruit and other trees in full bloom.

To see the fruit trees clothed in their snow-white mantles, blushing under the rays of the springtime sun, makes the bee-keeper once again begin to think of his little friends—*les abeilles*.

I cannot say anything of interest about bee-keeping out here, for there are but very few hives around the district, and during my twelve months out here, most of the time despatch carrying, I have come across very few hives.

I have not, as yet, had the honour of the opportunity of meeting a French bee enthusiast with whom to have a few words.

All my leisure time is spent out here in learning French, which I am very anxious to learn. As I have already had several years of it in England, I am now making rapid progress, and according to what the French people tell me, I speak—*très, très bien*.

I hope that you are having better weather in England than we are out here.

With best wishes to the Editors, and the best of success to the "B.B.J." and "B.K.R."—L.-CPL. J. L. TICKELL, R.E.

THE BUSINESS OF HONEY PRODUCTION.

[9274] I am sorry if I conveyed the impression that I was alluding to financial assistance when I spoke of a "lead." No one can be more appreciative, I think, of the efforts and time given to the welfare of our association members by our committees, &c., as our leaders, which, after all, they are.

Although I touched distribution I have as yet nothing serious to offer. I wished really to make more use of the machinery we have, to get more parts working, and to get at this apathy which, I suppose, we must name inconvenience of abode, so one has to be pretty keen to undertake a journey of any length to attend a bee-keepers' meeting, while, as a class, we are not trained to take part. Surely if we have for our object the increase and fostering of a branch of our own national prosperity it is worth a little more effort, especially in the face of Colonial competition and present-day needs. In asking for a lead I was considering the British Association the recognised meeting-place of the affiliated associations, and I dare say there could be more arranged if there was shown to be more interest, so that any idea or move could have the weight of the whole thrown into it. I think uniformity of action is the only way to hold our market, (1) by the adoption of an "All British" label; (2) the advertising pamphlet spoken of. The labels should have a guarantee and reference number on them, and these should be a source of moderate income. I gathered from Mr. Smallwood's articles the chief reason of failure of the British Honey Company was the irregularity and differences in samples of honey. I have run into it again; it is impossible to keep the two things separate, so I think by more advertising and more bees we shall get more members and a bigger demand for produce, which ought to mean more prosperity, while if we show that we intend to do something to foster a British industry, and can

recommend ours to disabled soldiers as a source of income—which we can—we ought to get direct State grants. We have plenty of influential friends, and I dare say we should find a few philanthropic, as this is the best form of charity. There is still time and need for the scheme of "Distribution." Our secretaries can tell where the best results and largest keepers are. Let us see what we can supply at this season's end. Most big things have small beginnings. I hope Mr. Smallwood will not think me impatient, but we got as far as this at the 1914 annual meeting of the British Bee-keepers' Association, and I think the least we can do to save our faces is to frame a conference meeting. When we have our "imported total" jump almost double in one year no one can deny its importance, and at a time when luxuries are on the decline, and a large part of the population engaged in war work, it is obvious that we must no longer consider honey a "luxury."

I suppose the proprietors of the JOURNAL would help us with the advertising material if we can guarantee the call for them. If we could decide on one or two centres to commence with it would be something. But it certainly seems we must make somebody a paid servant for a portion of the year at any rate, if we are to have uniformity in samples, with prompt attention. We have our "Bees at the Front" and "*Bombus militia*" in print. Who will join our "Volunteer National Guard"?—A. H. HAMSHAR.

Queries reaching this office not later than FIRST POST on MONDAY MORNING will, if possible, be answered in the "Journal" the following Thursday. Those arriving later will be held over until the following week. Only SPECIALLY URGENT queries will be replied to by post if a STAMPED addressed envelope is enclosed. All queries must be accompanied by the name and address of the sender, not necessarily for publication, but as a guarantee of good faith. Correspondents are requested to write on one side of the paper only.

SWARM PREVENTION.

[9046] Re article on "Swarm Prevention," Demaree plan. How would drones escape from upper combs with excluder below?—G. HALL, JUN.

REPLY.—If you read Mr. Shepherd's article carefully you will notice at bottom of first column, p. 134, he says:—"A small entrance is provided above the screen wire board, etc." We have not seen the device mentioned or an illustration of it, but it is not a difficult matter to arrange an entrance between the two boxes. This would allow the drones to escape.

HONEY IMPORTS.

The value of honey imported into the United Kingdom during the month of April, 1916, was £5,771.—From a return furnished to the BRITISH BEE JOURNAL by the Statistical Office, H.M. Customs.

Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. All questions must be accompanied by the sender's name and address, not necessarily for publication, but as a guarantee of good faith. There is no fee for answering questions.

X. Y. Z. (Carnarvon).—*Utilising Dark Honey.*—You might make it into mead or vinegar, or sell it to a chemist or confectioner for manufacturing purposes. We cannot tell the value without seeing a sample, probably from 4d. to 6d. per lb.

DELLFIELD (Middlesex).—*Discoloured Section.*—The surface of the comb is stained by the bees travelling over it, due to the slow or broken honey flow; this has also caused the lumpy and irregular surface. The honey is mainly from the lime trees, and this will account for the greenish colour.

J. CHESHIRE (Atherstone). — *Identification of Insect.*—It is one of the genus Andrena or sand bees.

D. B. (Pembroke).—They are usually bought to work up into stocks or to unite to and re-queen weak colonies.

NOVICE (Kent).—(1 and 2) She and her worker progeny will remain pure. A queen only mates with a drone once in her life. (3) You could perhaps keep them in a nursery cage, as illustrated on pages 276 and 277 of the BRITISH BEE JOURNAL, August 5th, 1915.

G. W. (Eardisley).—(1) It will not extract. The only method is to cut the comb up and place in a vessel in a water bath, then heating until the wax is melted. When cold the wax is taken from the top of the honey. (2) Under these circumstances it will not hurt to use them again.

Suspected Disease.

GARDENER (Penistone).—We do not find disease in the bees sent.

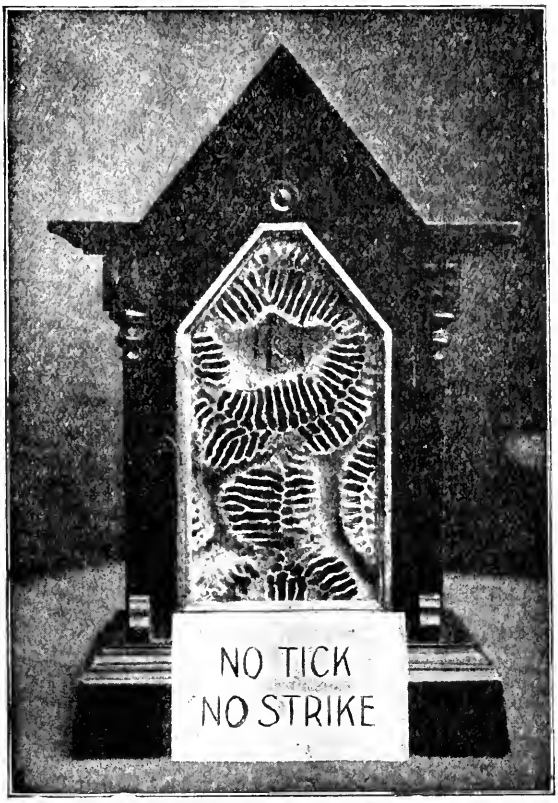
Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices (not exceeding 7 lines) in this column, 10 lines charged 3s. 6d., up to 15 lines 5s., which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

June 27th to July 1st, at Manchester.—Royal Agricultural Society's Show. Bee and Honey Section, under the direction of the B.B.K.A. Prizes arranged in groups of counties for Associations affiliated to the B.B.K.A. Schedules from The Secretary, 23, Bedford Street, Strand, W.C. **Entries close May 29th.**

PHOTOGRAPH of Comb in clock-case from which 7 lbs. of Honey was extracted. Seventy pounds were abstracted from the hive also. These Bees were badly affected by "Isle of Wight" Disease and treated by M. C. Pay of Croydon, and cured by IZAL washing, spraying and Izalized food. He had the hive given to him to be destroyed, May 24th, 1912, on which day he began his treatment.

"In IZAL they had placed in their hands a worthy and formidable weapon for battling against the bacillus."—*Sir James Crichton-Browne, F.R.S.*



IZAL is supplied by Royal Warrant to H.M. The King.

2 Teaspoonfuls Izal Fluid to 1 gallon of water for washing and spraying New Queen Bee inserted on June 12th, 1912.

In September 77 lbs. Honey taken from them. At present, June, 1915 descendants of the original diseased bees are quite healthy.

IZAL

is a Reliable Remedy against Foul Brood.

Sold Everywhere in Bottles, **6d.** & **1/-** each.

Ask for full details of IZAL treatment sent post free by

Newton, Chambers & Co., Ltd., Thorncliffe, nr. Sheffield.

BRITISH BEE-KEEPERS' ASSOCIATION.

The monthly meeting of the Council was held at 23, Bedford Street, Strand, London, W.C., on Thursday, May 18th, 1916. Mr. W. F. Reid presided, and there were also present Miss M. D. Sillar, Sir Ernest Spencer, Messrs. A. Richards, G. Bryden, T. Bevan, G. R. Alder, G. S. Faunch, G. W. Judge, J. Herrod-Hempsall, Association representatives J. Pearman (Derbyshire), E. Ff. Ball (Buckinghamshire) and the Secretary, W. Herrod-Hempsall.

Letters expressing regret at inability to attend were read from Dr. W. Anderton, Rev. A. C. Atkins, Col. H. F. Jolly, Messrs. C. L. M. Eales, J. B. Lamb, F. W. Harper and J. Steel.

The minutes of Council meeting held on April 20th, 1916, were read and confirmed.

The following new members were elected: Mrs. Walford, Mr. Tom Crane, Mr. H. W. Cousins, and Mr. G. W. Black.

The Leicestershire Association nominated Mr. W. W. Falkner and the Essex Association Mr. G. Horscroft as their representatives, and both were accepted.

The report of the Finance Committee was presented by Mr. A. Richards, who stated that payments into the bank for April amounted to £6. The bank balance at the end of April being £144 8s. 11d., payments amounting to £13 3s. 10d. were recommended.

The Secretary reported that the Educational Apiary had been moved to the new site in the London County Council park at Golder's Hill, and that it was being got in order ready for commencing classes.

The South Staffordshire Association applied for a Preliminary Examination, and the same was granted.

Next meeting of Council, June 15th, 1916, at 23, Bedford Street, Strand, London, W.C., and the Council meeting following that will be held on June 29th at the Royal Show Ground, Manchester.

BRITISH BEE-KEEPERS' ASSOCIATION.

The Council of the British Bee-Keepers' Association are anxious to obtain gifts of honey for the wounded soldiers in the London Hospital, where it is urgently needed both for food and medicinal purposes. They will, therefore, be grateful for gifts of same, no matter how small, from bee-keepers throughout the British Islands. It is unnecessary to explain our obligations to these brave fellows, who have sacrificed health and limbs for the sake of our country. Gifts should be sent addressed to the Secretary, B.B.K.A., 23, Bedford Street, Strand. The donors' names will be published in the "B.B.J." and RECORD.

W. HERROD-HEMPSALL,
Secretary.

HONEY FOR LONDON HOSPITAL.

Amount already received ... 254½ lbs.

REVIEW.

The Sense Organs on the Mouth-parts of the Honey Bee, by N. E. McIndoo, Ph.D., published by the Smithsonian Institution, Washington, D.C., U.S.A.—Although at least three different kinds of sense organs on the mouth-parts have been called organs of taste, the author says no one has ever attempted to prove experimentally the function of these organs. To prove whether bees have a true gustatory sense, experiments were carried out to determine whether they have likes and dislikes in regard to foods, and a careful study was also made of the morphology of all the sense organs on the mouth-parts of the honey bee. The principal food used was a candy made with confectioner's sugar, with a small portion of honey. Various chemical substances were used for flavouring the candy or imparting to it a strong odour, such as oil of peppermint, quinine, vinegar, carbolic acid, alum and salt. These experiments showed that bees in regard to foods have likes and dislikes. Before showing preference between foods they always eat more or less of them first, unless the foods contain strong repellents. Some of the substances fed proved to be injurious to them. For instance, the bees ate the candy containing quinine as freely as they had previously eaten the pure cane-sugar candy, but after the third hour they ceased to eat it. By this time a few were dead and several were sick. With foods containing repellents, bees showed that they preferred the pure foods by freely eating these while refusing the former, and when foods with repellents only are given them, they eat very sparingly. Foods were tried con-

taining bitter or sour substances, also sodium and potassium salts.

From the above experiments Dr. McIndoo says the results clearly demonstrate that bees have likes and dislikes in regard to foods, and it seems that their faculty to discriminate between foods is more highly developed than ours, because they can distinguish differences between foods fed to them better than the writer. The results obtained demonstrate that bees like honey best of all foods, and that they can distinguish marked differences between various kinds of honey. The fact that bees must first eat more or less of the foods before being able to discriminate differences between them, unless they contain repellents, indicates that bees have a true gustatory sense, providing their discrimination is not accomplished by means of the olfactory sense. To determine this the author made a thorough study of all the sense organs on or near the mouth-parts. These are minutely described and illustrated, and it is astonishing the number found on the tongue, jaws, and other parts of the mouth. The writer found only two general types of sense organs on these parts. They are innervated hairs and innervated pores, called by him olfactory pores. The innervated hairs, he thinks, serve only as tactile organs. Olfactory pores were found at the bases of the tongue and labial palpi, on the maxillæ near the maxillary palpi, widely distributed over the mandibles, on the cervical plate, in the buccal cavity, on the sides of the head and on the scapes of the antennæ.

After discussing the extensive literature on the subject, and comparing the works of the different authors, Dr. McIndoo says that, in his opinion, insects do not have a sense of taste, because their highly developed olfactory organs are sufficiently capable of receiving the odours, however weak, from any and all substances. He concludes by saying that the olfactory sense of the honey bee is highly developed, and that it serves as an olfactory and gustatory perception combined.

This paper of 55 pages, with its illustrations and tables, shows a large amount of patient and persevering work, and we recommend its perusal by those bee-keepers who are interested in medicating candies for experiment, as they will find much useful information in it.

EXPERT HELP WANTED.

Could any expert in the neighbourhood of Shaftesbury undertake to remove a colony of bees from the roof of a cottage about one mile from Shaftesbury? For further information write to Capt. Edgar Lees, R.N., White Cross, Wyke Regis, Dorset.

WITH THE BEES AT THE FRONT.

By Sergt. A. G. Atwell.

(*Continued from page* 124.)

After our stay at Guttersteine had lasted some five or six weeks we received a very sudden order to move to a new part of the line. We started our march early in the evening, and reached the town of Merville about midnight, this place being about midway between Guttersteine and our destination. We rested there for several hours until daybreak, and then continued our march, which brought us in the afternoon to Bethune, quite a fair-sized town some ten miles from the firing line. Marching straight through here we made our way to the front, and launched an attack against the Germans at a small village called Festubert, at which place I had some very interesting experience in connection with the bees. There was also a little hamlet called Gorre, which we passed through just before reaching Festubert, at which I found a quaint old cottage and bee garden, having some eight or ten skeps wintered down, and there was quite a lot of appliances and empty skeps in a barn, which proved that the people who once lived there had done considerable business with their bees. We spent our Christmas at Festubert, and during our stay there, when things were a bit quiet, I would often take a walk to see the bees at the cottage. Unfortunately at each visit I would find one or two skeps less, sometimes caused by a shell dropping near, but in the majority of cases it was the Tommies (who were billeted in the cottage) trying to get at the honey. At the last visit I made I found every skep gone. I was just beginning to think that my adventures with the bees around this part were finished, when one day a friend came running into the dressing station carrying two large frames of honey, which he told me he had taken from a hive at the other end of the village near the firing line. I learned from him that there were quite a lot of hives there, although many had been badly knocked about by shell fire. Having nothing particular to do at the time I got him to take me up to the garden, although we ran some risk from shell and rifle fire. The house, which stood on one side of the main street, was quite near the old church, which was a total wreck. We passed through a small front garden and then through the house (which was badly knocked about, very little of the roof remaining) into the long garden, at the back of which stood the apiary of large frame hives running right down the side of the garden. But what a sight: I could do nothing for some moments but gaze in

silence on the scene before me. Only about two of the dozen or more hives seemed to have escaped destruction from the murderous fire which only a few days before had been rained upon them. Huge holes made by shells of the heaviest calibre dotted the garden. Hives were torn to pieces, broken combs and frames scattered everywhere, and little clusters of bees, the majority of which were dead through exposure to the cold, made up a scene which I feel quite unable to properly describe. Had the bees been suffering from any disease, such as "Isle of Wight" or foul brood, matters would not have been so bad, but a thorough examination which I gave them failed to disclose the slightest trace of anything wrong. They had plenty of stores, but I had some difficulty in finding combs containing honey which were not damaged much, but I managed to find a few which I tied together

SOUVENIRS COLLECTED BY SERGT. ATWELL.

to take away. Passing back through the house I found some postcards scattered about, and by the addresses on them I came to the conclusion that the owner of the apiary was Mons. Omer François. I also found some photos of the family, and have every reason to believe that one of the gentlemen must have been Mons. Omer François. I hope to tell later of a second visit which I paid to this apiary, also of one or two other interesting experiences which I had at this village.

(To be continued.)

The illustration given is of a number of some of the souvenirs collected by Sergt. Atwell. 1 is the time fuse from a heavy shrapnel shell. 2 and 5 are shrapnel bullets; 3 a rifle bullet which wounded Sergt. Atwell in the head. It will be noticed the bullet has been knocked out of shape; 4, two pieces of moulded beeswax; 6, a shell splinter; and 7, piece of a "Jack Johnson."

CORRESPONDENCE.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

DRUG TREATMENT OF FOUL BROOD.

[9275] To New Zealand bee-keepers generally it seems remarkably strange that British bee-keepers should still advocate the use of drugs in their treatment of bee disease, when such treatment has apparently had no effect in reducing the disease which is so rapidly killing off their bees. It may be claimed that several reports of success have appeared in the "B.B.J." Just so, but the same may be said in favour of the various drugs advocated at different times since the Sproule and Cheshire cure (?) by phenol, and Cheshire's salicylic acid treatment. There were then (1885 and onwards) reports of success with these drugs published. They were largely used in New Zealand and Australia in the '80's, and I received two or three reports of success, which were duly published in my "N.Z. and A. Bee Journal," but with more mature experience those very bee-keepers declared they must have been mistaken, as they had made no progress against disease.

British bee-keepers gradually came to the conclusion that the Sproule and Cheshire treatment did not come up to expectation, and other drugs were advocated in turn, camphor, extract of Eucalyptus, Napthol-

beta, and several more. Each had its adherents for the time who professed to have had success, yet they were eventually dropped.

My own experience with several of the drugs was, that under the most careful treatment, which I could not expect from the average bee-keeper, some of the drugs seemed to check the spread of disease in the colony under treatment, but did not free it from disease.

By 1892 most of our bee-keepers—myself included—were convinced that drug treatment was a failure, and was condemned. Subsequently, however, when I read such a glowing account of the "Cures by Izal," in the 1904 edition of Mr. S. Simmins' "Modern Bee Farm," I concluded to give Izal a thorough good trial at our State apiary. We had one or two cases of disease every season, brought into the apiary from outside, which we always treated on the "Jones'" (more popularly known as the McEvoy) method. The Izal treatment was very strictly carried out as an "official experiment," under the supervision of myself, and exactly according to the directions laid down by Mr. Simmins. The treatment was carried out in two colonies during the whole of one season, and my report was to the following effect: that the Izal treatment, like that of other drugs, apparently had some little effect in checking the spread of disease within the affected hive, but did not cure it; consequently I could not recommend the use of Izal except purely as a disinfectant in the apiary.

I quite agree with Mr. C. H. Heap (September 2nd) that no compensation should be allowed for the destruction of diseased bees; but one never need to expect improvement in British bee-keeping until you get legislative control over the industry. Your misfortune in this respect (more's the pity) is our opportunity.—J. HOPKINS, Auckland, N.Z.

January 20, 1916.

AN AMUSING INCIDENT.

[9276] I had a rather amusing incident happen while rendering wax. A man came in, and, noticing some wire in the refuse, asked me how it got there. I told him we stretched it across the frames. He wanted to know what it was for, and, quite innocently, asked me if it was for the bees to "peak on." Fancy this in Mr. Crawshaw's district!—H. TURNBULL, Norton, Malton.

EXPERIENCES WITH "ISLE OF WIGHT" DISEASE.

[9277] For a long time I have felt inclined to write to your JOURNAL, but have always more or less "funked" it. However, I herewith take the plunge. I have been a bee-keeper for twenty years, and though I do not lay claim to being an expert, I have naturally gained a good deal of experience.

In the first place a correspondent of a few weeks ago mentioned 212 deg. F. as the maximum temperature wax was heated to before being made into comb foundation.

As a steam engineer I am using steam every day at a temperature of over 700 deg. F., and from my point of view there would be no difficulty in heating wax to 500 deg. F. or more if desirable. Secondly, a correspondent suggested raising hives several feet from the ground as a precaution against "Isle of Wight" disease. I have kept several stocks with their entrances over the sill of my attic window, about 18 ft. from the ground, and I may say they took "Isle of Wight" disease and died as well as any on the ground level. But I have noticed in the early stages of the disease before crawlers appear in any number, bees often rush out on to the alighting board, apparently to take flight, and then seem to mistrust their wings, and after running about a bit return to the hive. Possibly if an entrance could be devised that, while allowing a free exit, would not allow a bee to run back, so that any that could not fly properly would be sorted out, it might cut off the source of infection from the healthy bees, but even so it would be useless in cold weather, and that is, of course, the most fatal time.

For three years I have experimented with "Isle of Wight" disease, and the results have been so good that I am now going in for bee-keeping on a larger scale. My experience of black bees is, that they cannot be beaten as honey gatherers, but that they are absolutely hopeless when attacked by "Isle of Wight" disease. Also that they are much more liable to be attacked, and the disease develops its different stages much quicker, and I think that point probably explains the difference of opinion between yourself and your correspondent as to how long it takes "Isle of Wight" disease to kill a stock.

Two years ago last autumn I knew of about fifty stocks of bees in this district, of which seven were bred from a good class strain of Italians. During the winter they all died excepting seven, six of which were the Italians, and the only solitary black stock that to my knowledge survived was fed upon food medicated with Izal.

Last autumn, in an out apiary, I had four stocks, three blacks and one Italian. I had a peep a few weeks ago, and found all the blacks doomed and the Italian *perfect*. In September, 1914, I was called in to see what was the matter with six stocks of bees, as the wasps were killing them—the owner said. Of course it was

the usual thing, bees practically gone with "Isle of Wight" disease, and *had soiled the combs badly.* I closed up the entrances and advised burning, and of course it was not done, for the owner rang me up last June to say two of the hives were occupied by stray swarms; they were there ten days before I had time to open hives—*the queen had just started laying.* I gave the unoccupied combs an Izal bath, and left them. To-day those bees are in perfect condition, and if it is of any interest I will send a good sample for you to examine to see if you can find any trace of disease, and (to be quite fair) these are blacks, or near enough to be called so. Like Mr. Mace I thought I had an immune strain, for I obtained brood and reared queens from the six Italian stocks mentioned above, and gave them diseased combs and honey, and they thrived on it in every case (some have had them now practically two years). But as a final test I drove some bees in the fatal stage of "Isle of Wight" disease and mixed up with them, and though they tried hard to get rid of it by throwing nearly all the strangers out, the disease showed itself in three weeks, but disappeared in ten days under treatment.

I think in the argument, Blacks versus Yellows, a great deal too much stress is laid on the colour, which, of course, is nothing.

Take the case of poultry; no experienced man who wanted eggs—that is, utility—would be satisfied with any bird because it happened to belong to a certain breed of a certain colour. He would go for a bird whose parents had produced their 200, or more, eggs per year, and thereby get the strain, which I think is everything.

My plan is to buy queens of a certain strain that I have experimented with, and I never go farther away from that strain than a first cross. Take the case of swarms quoted above—those bees went in under certain conditions, and have thrived for practically a year at any rate. In future I am going to create those conditions every summer—which is what Simmins' "Modern Bee Farm" teaches—namely, a fortnight without brood, with nothing to do but clean up, and then greater energy than ever under a young queen.

I have had plenty of failures and expect to get a few more, but it will take more than a few to persuade me it is time to retire from bee-keeping because of "Isle of Wight" disease.—W. P. Lilwall.

EXPERIENCES.

[9278] It is frequently being asked, Do bees add wax to the foundation when drawing it out? I have cut out and melted down six good, clean brood combs, which had become pollen clogged, and I found that the wax from them weighed equal to five sheets of medium brood base foundation, this base weighing 9½ sheets to the lb. The frames were filled with this class of foundation two years ago.—W. Ion, Healing.

THE FIRST COUNTRY TO *ADOPT* A STANDARD FRAME.

[9279] When reviewing Dr. E. F. Phillips' "Bee-Keeping" (December 23rd, 1915), you stated:—"This country (England) was the first to 'adopt' a standard frame." Possibly the British Bee-keepers' Association was first in declaring, or suggesting, the dimensions of a frame that should be considered standard for Great Britain, but it was long, long years afterwards before it was generally adopted. I cannot just now lay my hands on the date when the British Bee-keepers' Association declared for a standard frame, but in March, 1882, the then Editor of The British Bee Journal (C. N. Abbott) made the following remarks in the number for that month:—"The standard-frame question was mooted by us in the winter of 1875, and had it been taken up by the Association at that time, when there were comparatively few frame-hives, or frame-hive makers, in England, it would have been easy of adoption. Now, when there are a hundred times as many hive makers and vendors, and a thousand times as many hives in existence, it will be many years before a standard will become general, because its introduction will be essentially slow," etc. I think I shall be within the mark by declaring that it was fully 20 years after the above date before the British standard frame had been generally "adopted" in England.

Be this as it may, I claim that New Zealand was the first country to practically adopt a standard frame, and this was done automatically from the very outset of our career in modern commercial bee-keeping in 1878, when I introduced the ten-frame Langstroth hive. As a matter of form, the Langstroth frame was adopted by the New Zealand Bee-keepers' Association, and also the Victorian (Australia) in the early '80's, where it has been the standard ever since. With the exception of an occasional experimenter no other frame has been used since frame-hives were introduced. — J. Hopkins, New Zealand.

VAGARIES OF "ISLE OF WIGHT" DISEASE.

[9280] Why, I ask in good faith, should we blame our "modern intensive bee-keeping" (page 88) so largely for the complete ravage caused to our industry by the "Isle of Wight" disease? If this is so, why was its violence confined to the radius, from which we get its name, for the three seasons previous to its attack on the mainland? Although it may be allowed that the basis on which the disease thrives is of ancient age, it, to me, does not appear to be proved that the virulent, or contagious, stage is so ancient, and the twenty years previous—since the modern system began to be taken up and studied—surely provided rather a long scope for the disease to make headway, if this is so. Also, to my mind, it is not a "fair assumption" that old combs, skeps, etc., would be, and have been, destroyed, and I think we might favour the new in that respect, as there is bound to be a certain amount of knowledge accumulated, with keener interest, and there is no doubt the movable comb hive lends itself best to cleanliness, and to restarting after an attack of the disease.

Swarming and Scouts.—There certainly seems more safety in numbers if swarms are distributed, but I don't think Nature assists us very much in this respect, as seasons lately have been favourable for increase almost to any extent, being early, which brings stocks along with just that little interval to allow all to make good, to get ready for the main honey flow. With regard to scouts I think the damage is generally done before the "scout" period, as diseased decoys may be visited and robbed before the middle of March, and, curiously, I have complained for three years of a hive near home being left open, and it captured a swarm every year; but in this case Nature persevered, and the last one has lived through two seasons, but they are not near my own bees. We ought to put more work in for the promotion of *qualified assistance* to stamp out and destroy these decoy hives by *State compulsion*.

Page 108.—I don't think Mr. Crawshaw owes any apology, and we await his return to criticism with interest. And as shifting responsibility is the order of the day, I shall pass it on to Mr. Smallwood, who made a direct appeal. I merely wished Mr. C. to consider the point of progress to suit my own ends. I am pleased to know that he is doing "the bit that matters," in the great cause. I hope more of us will labour harder for the maintenance of our "times of leisure."—A. H. HAMSHAR.

The following poem, though it may not perhaps be classed as good poetry, may prove interesting to readers, as it has been written by our well-known correspondent, Mr. Hamshar, during intervals in his military duties "somewhere in France."

NATURE OBLIVIOUS.

The spring has come, and starts with zeal
Her task of recreation to fulfil.
Not so with man; with purpose firm,
A retrogressive course he takes,
The beauties of this earth to kill.
But Nature works—oblivious!

The fruitful trees, whose well-earned rest is o'er,
Their purpose to fulfil
Will don their coats of various hues
And blossom forth their precious fruits.
Man takes, but doesn't really appreciate.
But Nature works—oblivious!

The bee, too, does not put on indolence with ease,
But strives with unabated zeal her purpose to fulfil.
Her life is short, her needs are great:
She claims this earth to vegetate.
Man for his need appropriates, at what cost?
But Nature works—oblivious!

The lark his song in sunlit glow
Tells out to all a homage bright;
His sufferings o'er, thro' wintry winds,
Brings forth a song of thankfulness and glee.
Man answers with the groan of shrapnel!
But Nature works—oblivious!

The rolling river on its course,
Encased by beauties rare,
Strives its best to vivify,
Its guards on either side,
Man cares not much who goes under,
But Nature works—oblivious!

Now we must not be pessimistic,
Many there are who have the secret
And are content to take the bitters
That self may be erased;
When wrong and right are separate,
Then Nature's work is done!

A. H. HAMSHAR.

PRESS CUTTING.

BEES AND AZALEA PONTICA.

A most interesting natural history fact is recalled to the naturalist and botanist alike by the capture of Trebizond by the Russians. It is this region which has the somewhat evil reputation of being productive of poisoned honey. Tom Moore writes of it thus:

"Those bees of Trebizond,
Which from the sunniest flowers that glad
With their pure smile the garden round,
Draw venoms forth that drive men mad!"

These deleterious properties in the honey arise solely from the poisonous nature of the blossoms of the Azalea pontica, from which it is gathered. This beautiful shrub, whose golden flowers give great brilliancy to the mountain slopes around Trebizond, is narcotic and poisonous in all its parts. It is to these properties Xenophon refers in his famous account of the "Retreat of the Ten Thousand" in Asia, after the death of Cyrus, when he tells how his soldiers became stupefied and delirious, as if intoxicated, after partaking of the honey of Trebizond.

The bad effects are, however, temporary, though this cannot be said regarding the honey extracted from all flowers. As may well be supposed, the honey of this region is held in much disfavour throughout Asia. It is at this time of the year—the season of flowering—that the Azalea is seen at its best.—W. K. From the *Gardener's Magazine*.

Queries reaching this office not later than FIRST POST on MONDAY MORNING will, if possible, be answered in the "Journal" the following Thursday. Those arriving later will be held over until the following week. Only SPECIALLY URGENT queries will be replied to by post if a STAMPED addressed envelope is enclosed. All queries must be accompanied by the name and address of the sender, not necessarily for publication, but as a guarantee of good faith. Correspondents are requested to write on one side of the paper only.

COMB FOUNDATION AND "ISLE OF WIGHT" DISEASE.

[9047] I should like to ask if the cause of "Isle of Wight" disease in your opinion is in any way likely to be brought about by the use of comb foundation? The district round Bridgnorth has been literally cleared, and the merry hum of the bee is no longer heard in the garden or fields. The number of stocks that have fallen victims to this disease are over three hundred, and all those bee-keepers who have lost their bees are users of comb foundation.

Now the strange thing is that the only bee-keeper in this district who has, up to the present time, not lost either all, or part of, his bees, is one who has never used any comb foundation, and his stocks are healthy and strong, while others in the neighbourhood are gone. Is it possible, or probable, that some dealers and manufacturers of comb foundation do not boil the old combs so as to thoroughly sterilise it and destroy all germs of disease?—J. S. LAWTON, Hon. Sec., Bridgnorth B.K.A.

REPLY.—If "Weed" foundation is used there is no danger of introducing disease, as it is thoroughly sterilised.

Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. All questions must be accompanied by the sender's name and address, not necessarily for publication, but as a guarantee of good faith. There is no fee for answering questions.

MRS. D. H. S. STUART (Lothian).—*Disinfecting Quilts.*—They should be boiled for thirty minutes to be perfectly safe.

Suspected Disease.

VULCAN (Herts).—"Isle of Wight" disease was developing in the bees sent.

BEGINNER (Minafon).—We are unable to state the cause of death of the bees. They did not appear to be affected with any disease.

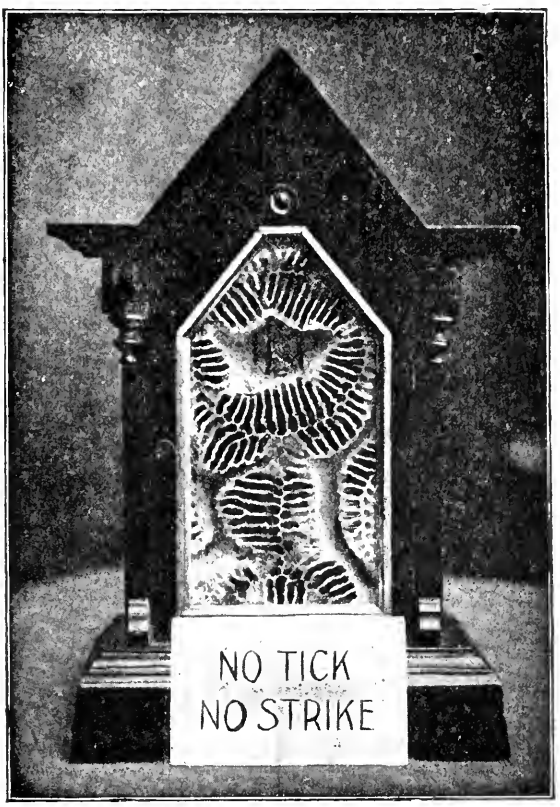
Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices (not exceeding 7 lines) in this column, 10 lines charged 3s. 6d., up to 15 lines 5s., which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

June 27th to July 1st, at Manchester.—Royal Agricultural Society's Show, Bee and Honey Section, under the direction of the B.B.K.A. Prizes arranged in groups of counties for Associations affiliated to the B.B.K.A. Schedules from The Secretary, 23, Bedford Street, Strand, W.C. **Entries close May 29th.**

PHOTOGRAPH of Comb in clock-case from which 7 lbs. of Honey was extracted. Seventy pounds were abstracted from the hive also. These Bees were badly affected by "Isle of Wight" Disease and treated by M. C. Pay of Croydon, and cured by IZAL washing, spraying and Izalized food. He had the hive given to him to be destroyed, May 24th, 1912, on which day he began his treatment.

"In IZAL they had placed in their hands a worthy and formidable weapon for battling against the bacillus."—*Sir James Crichton-Browne, F.R.S.*



IZAL is supplied by Royal Warrant to H.M. The King.

2 Teaspoonfuls Izal Fluid to 1 gallon of water for washing and spraying New Queen Bee inserted on June 12th, 1912.

In September 77 lbs. Honey taken from them. At present, June, 1915 descendants of the original diseased bees are quite healthy.

IZAL

is a Reliable Remedy against Foul Brood.

Sold Everywhere in Bottles, **6d.** & **1/-** each.

Ask for full details of IZAL treatment sent post free by

Newton, Chambers & Co., Ltd., Thorncliffe, nr. Sheffield.

THE ROYAL SHOW.

We are sorry that not many entries have up to the present been received for the Royal Show. As the weather has now turned warm and stocks are working well, more of our readers will be able to see a good prospect of having honey ready for the Show, and we hope they will do their best to make an entry, and exhibit. The British Bee-keepers' Association have been at much trouble to keep their part of the Royal Show going, and it is now, to use an Americanism, "up to" bee-keepers to back them up by making the Show a success. The British Bee-Keepers' Association are anxious to keep bee-keeping to the front during these trying times, as after the war there is no doubt it will receive a great impetus. A good display at the premier show of the country does much to keep bee-keeping and honey-producing before the public and to create a market for our own produce. We are quite aware that apiaries are depleted by "Isle-of-Wight" disease, that numbers of bee keepers are away on military or other national duties. All the more reason that those left should make an extra effort. In order that everyone may have a chance the closing date for entries has been made a week later, and we hope all who can will do their best to make the show a success.

The last time the Show was held at Manchester was in the year of Queen Victoria's Diamond Jubilee, 1897, when there was a competition for "trophies" staged by the County Associations. There was a record attendance that year, and as Manchester is so well situated there is sure to be a good attendance again this year, and among the number we are hoping to meet many old friends from the county of Lancs., and other parts of the country.

BRITISH BEE-KEEPERS' ASSOCIATION.

The Council of the British Bee-Keepers' Association are anxious to obtain gifts of honey for the wounded soldiers in the London Hospital, where it is urgently needed both for food and medicinal purposes. They will, therefore, be grateful for gifts of same, no matter how small, from bee-keepers throughout the British Islands. It is unnecessary to explain our obligations to these brave fellows, who have sacrificed health and limbs for the sake of our country. Gifts should be sent addressed to the Secretary, B.B.K.A., 23, Bedford Street, Strand. The donors' names will be published in the "B.B.J." and RECORD.

W. HERROD-HEMPSALL,
Secretary.

HONEY FOR LONDON HOSPITAL.

Amount already received ... 254½ lbs.

A ROLL OF HONOUR.

Although bee-keeping is considered a minor pursuit, we venture to say that it has provided more fighting men than the usual average of any industry. To place on record the part the members of our craft have played in the present war we propose to make a "Roll of Honour," and shall be pleased if our readers will forward us the **Names** and **Addresses**, together with the **Regiment** and **Rank**, of any bee-keeper serving his King and Country at home or abroad; also if killed or wounded.

We print a further list of names to those sent in, and shall be pleased to have other names as soon as possible.

Lieut. W. E. C. Musson, Bridge Avenue, Hammersmith.—R.A.M.C.

BEE-KEEPING IN ONTARIO.

We have often commented on the interest displayed by the Governments of other countries in apiculture and the practical help and encouragement they give to bee-keeping as compared to that we receive in England. The following notice we have received from Mr. Morley Pettit, the provincial apiarist, of Ontario, needs no comment:—

APIARY DEMONSTRATIONS, 1916.

Feed or fight! We have raised an enormous army of fighting men. Many of them have dropped their tools in the shops, left their machines, locked up their desks, or have left the ranks of the feeders to swell those of the fighters. We cannot all go to the firing line to fight, but we can do our utmost to feed those who have and their dependencies whom they have left to our care.

Honey is a staple that is sometimes classed as a luxury. It has a very real food value, and at this time when sugar is so expensive it should be more extensively used than ever before. The production must be maintained.

To help you "keep better bees and to keep bees better," the Ontario Department of Agriculture is arranging to hold apiary demonstrations in all parts of the Province. The practical nature of the programme is very inviting to all interested in bee-keeping, and in almost any district a good attendance is assured, provided the weather is suitable. A specially trained practical

bee-keeper is sent to take charge of the meeting and handle the bees, and he is generally assisted by local bee-keepers. Several hives are opened and the actual working of the bees explained. Often a queenless colony or one preparing to swarm serves as an excellent object-lesson. No matter how many or how few colonies you keep, you are sure to learn something at one of these meetings.

Already arrangements are well under way for over fifty of these meetings. The Department of Agriculture attends to all the advertising and supplies the speaker, so that the bee-keepers do not incur any expense whatever.

Interested bee-keepers desirous of having demonstrations in their apiaries should communicate immediately with Mr. Morley Pettit, Department of Apiculture, Ontario Agricultural College, Guelph, so that arrangements can be made for the meetings.

QUEEN-REARING AND INTRODUCTION.

(*Continued from page* 155.)

The rearing of queens is so fascinating that in the enthusiasm of carrying it out the beekeeper is liable to forget the opposite sex, which to-day is recognised as being quite as important as the mother. In the not very distant past the rearing of the drone was left to chance, so that often the best queens were mated to scrub drones, thus nullifying good work. He was looked upon as a lazy fellow, not worth attention; in fact, almost as a parasite, which, as is well known, are produced in prodigious numbers, both in the Animal and Human Kingdoms, and, because they are not wanted, survive all attempts to exterminate them, while the really valuable stock requires much attention to breed and bring to maturity.

Where to-day is the owner of a good milking strain of cows who does not realise the value of the sire in improving milk production? The fabulous sums paid for bulls, often mediocre in points so far as beef production goes, from noted milking herds prove the value now placed on the father by those men who have learned in the school of experience. Yet not many years ago the man who dared to suggest that a bull could have any influence in transmitting milking qualities would have been laughed to scorn.

The characteristics transmitted by the sexes are generally apportioned as follows:—Queen, working qualities and constitution; Drone, disposition. My own experience is that although temper is dependent almost entirely upon the father it is just as important to have the other qualities in the drone as well as in the queen; in the latter I would seek as much for a quiet disposition as in the male.

From this it will be understood that a stock vicious in temper should on no account be allowed to rear drones, or a vile-tempered lot of bees will populate the apiary. Vicious bees are good workers, like a kicking horse, which will do as much work as two docile ones but is difficult and dangerous to handle.

Careful observation, therefore, is necessary in choosing stocks for the rearing of drones. Those selected for this purpose should be stimulated early, and either a frame of drone comb or a brood frame fitted with a half sheet of drone base foundation, as used in shallow frames, inserted in the centre of the brood nest. These cells will soon be filled by the queen with unfertilised eggs, from which drones hatch and are brought to maturity by the nurse bees.

With the majority of live stock the control of mating is easy. Not so with the bee which, having wings, can fly where it lists. Two other points also have to be taken into account: 1. The range of flight of the drone is about four miles;

2. Drones are admitted to, and cared for in, any stock during the natural swarming season.

It is impossible to isolate an apiary in the good foraging districts of this country so that drones from other apiaries will be excluded; but if, as I saw done in

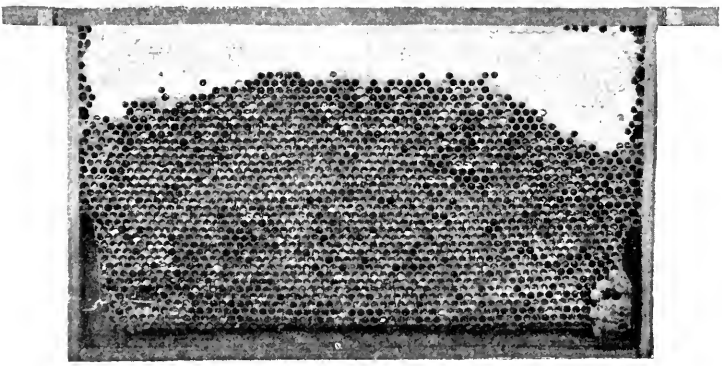


FIG. 75.

Switzerland, special queen-rearing apiaries could be established in bleak and barren wastes, the food being supplied artificially, then selection would be assured.

Under ordinary circumstances, the beekeeper has to be content to do all that is humanly possible to control selection, and trust to luck for it to come out right.

The rearing of drones can be controlled to a certain extent by using only full sheets of worker base foundation, but even so, our efforts may be thwarted by the bees' natural instinct, as they will at times tear down worker cells at the bottom corners of the combs and build drone cells in their place, and rear drones there-

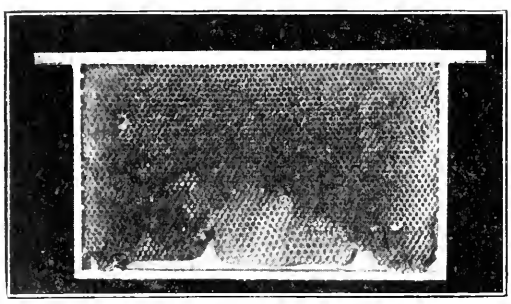


FIG. 76.

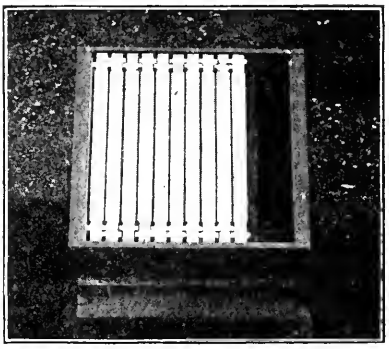


FIG. 77.

in. Even a pollen-clogged comb may be utilised for this purpose, as will be seen in Fig. 75, where just a small patch of drone cells have been built at one corner; while at Fig. 76 a huge piece of comb has been torn down in the centre at the bottom of the comb to accommodate drone cells.

The entire prevention of drone rearing can only be accomplished by close spacing the frames. This is done by drawing the metal ends of every alternate frame right to either end, then pushing all tight together, the intervening space being closed with the division board, as Fig. 77. To prevent the bees building comb in the empty space between the division board and the side of the hive it should be filled with cork dust or rags before putting on the super. Even if the rearing of drones has commenced, they are unable to emerge from the cells for want of room.

It is no use trying to prevent drone rearing by cutting out drone brood, as the bees will only build drone comb again.

(To be continued.)

ANCIENT BEE LITERATURE.

V.—Goddesses and Bees.

Amongst the goddesses, Ceres and her daughter Proserpina deserve our chief attention as connected with bees and bee-keeping. Their very offices brought them more naturally in contact with such creatures as lived on the fruits of the earth: and, in the case of Proserpina more especially, such of these as slept or rested during the winter months and awakened into new life each successive spring, as is the case particularly with bees. Ceres was the goddess of corn (cereals), but concerned herself generally with all the fruits of the earth. All flourished and grew when she smiled: all drooped when she frowned. Proserpina, too, may be taken as a symbol of fertility, for at her call there came a budding and springing forth of grass and leaf and flower on the approach of vernal spring. Mother and daughter indeed laboured hand in hand for the benefit of mankind.

The legend is a beautiful one. Proserpina in her budding maidenhood was playing with her companions in the sunny, flowery meadows when she was suddenly seized by Pluto, the god of the Underworld, and by him carried off in his chariot to the nether regions. Her mother, Ceres, missing her well-beloved daughter, wandered far and wide in quest of the fair maiden. After much searching, by the aid of Jupiter and Mercury, she discovered where Pluto had hidden her. With the help of these gods an arrangement was come to by which Proserpina could be restored to her mother and the upper world, but only on condition that she should spend from one-third to one-half of the year with her husband Pluto in the nether world. This residence above and below of course typifies summer and winter. Proserpina, in the mystical Orphic Hymns, appears as the all-pervading goddess of Nature who produces and destroys everything. She is generally depicted as a blooming virgin, the very counterpart of her lovely mother, but often appears as she is being carried off to Hades by Pluto.

The philosopher Porphyry says of Ceres: "The priestesses of Ceres, as being initiated into the mysteries of the terrene goddess, were called by the ancients bees; and Proserpina herself was denominated honied." Both goddesses had honey offered to them in their sacrifices. Our old friend Virgil, in exhorting husbandmen to prepare yearly for the grain and fruits of the earth, advises, as we have seen, all to venerate the gods and renew to great Ceres the sacred annual rites, offering up sacrifices at the last days of winter when the spring is serene. All rural youths should adore Ceres, and for her mix the honeycomb with milk and wine. The libation of honey, milk and wine was poured upon the sacrifices offered up to the goddess. When one of her priestesses was killed, Ceres caused bees to issue from her dead body. This idea of life rising from death was widespread amongst the ancients and appears to convey a faint glimmering of immortality. Transmigration was also a settled belief, and we read of bees entering into mortals and conferring on them the gifts of speech, eloquence, industry and poetic thoughts. Bees were "rays of divinity." Ceres taught the art of bee-keeping to Aristaeus, and he in turn instructed mankind in general. Wax candles, wax wreaths and wax images, as well as honey, were much used at the festivals held in honour of both Ceres and Proserpina.

Rhea, or Cybele, was the generator and custodian of all living things, and was usually accompanied by a number of bees in her journeyings. Her attendants, or priestesses, were, according to some writers, transformed bees, named Melissæ. This goddess it was who saved her son Jupiter from his cruel cannibalistic father, Keonos, by hiding him in a sacred grotto in the island of Crete, when his life was saved by the sacred goat Amalthea yielding him a supply of milk, while the sacred bees fed him with honey. This food of milk and honey is a very common phrase in Eastern literature, both sacred and profane. The well-known description of Palestine—a land flowing with milk and honey—conveys an idea of great fertility and wealth.

"Great is Diana of the Ephesians." She was indeed worshipped as a great goddess, and her splendid temple at Ephesus was included amongst the Seven Wonders of the World. She was a Roman goddess, but corresponded in most of her attributes to the Greek goddess Artemis. From being a twin-sister of Apollo, the Sun God, she was regarded as the goddess of the moon; and the moon was believed by the ancients to preside over generation. She was described as a bee, and the souls of the dead were supposed to come down from the moon to the earth in the form of bees. The same belief is also found in Hindu literature. The worship of Diana was conducted with splendid rites. She was the special patron of all sylvan sports. The bee was sacred to this goddess, and her priestesses were called bees, while her chief priest was designated the King Bee. One representation shows her standing on a bee, as if she dominated the whole race of *Apis mellifica*.

Venus, the Roman Goddess of Love, identical with the Grecian Aphrodite, had several temples erected to her in Rome, and rites were celebrated in her honour there and in Greece. The sacrifices offered to her were rather the fruits of the ground than animals. The libations offered to her

are referred to by an old poet in these terms :—" Venus was their only queen. Her they propitiate and duly worship with sweetly-smelling frankincense, and many a pure libation of fresh golden honey." Venus, being the mother of Cupid, knew his faults and was not slow in telling him of them. When stung by a bee he loudly complains, and she admonishes him thus :

" My infant, if so much
Thou feel the little wild bee's touch,
How must the heart, O Cupid! be
The hapless heart that's stung by thee? "

The Romans had a special goddess of honey, named Mellonia, to whom they made sacrifices, but all the gods and goddesses of ancient Greece and Rome of whom we have heard revered and honoured the bee, while all of them seemed to have admired and enjoyed the fruits of her labours. All had honey offered to them in their sacrifices, but it was particularly by those more immediately connected with the care of the fields and gardens that bees were most appreciated. Goddesses filled a very large part in the devotional spirit of the older religions, as is shown by the devotees of Isis and Pasht, of Artemis and Aphrodite, of whom we read so much in ancient literature. M.

HOMES OF THE HONEY BEE.

Apiaries of our Readers.

Mr. G. W. Judge is well known to his friends as a most enthusiastic bee-keeper. He is a member of the Council of the British Bee-Keepers' Association and the hon. secretary of the Crayford and District Association, one of the most successful and go-ahead of the smaller Associations, and its success is largely due to the energy and enterprise of Mr. Judge, who is heartily backed up by his committee and the members generally. We have great pleasure in publishing the following notes.

Responding to your invitation some time since to give a few notes regarding my work among the bees for the " Homes of the Honey Bee " columns, I take pleasure in submitting the following *résumé* of some of my experiences :—

Although it is nearly twenty years since our first stock arrived, I still have recollections of many exciting episodes. Primarily we were indebted to our old friend the late Mr. E. Longhurst, of Longfield, for starting us along the right course. He will be remembered by many of the older members of the craft as a very progressive and successful exhibitor and bee-keeper. As time went on the good advice he gave us became more and more apparent, while at the present time I feel tolerably certain that I would not be ranking among the bee-keeping fraternity but for the enthusiasm he instilled into my then youthful mind.

I well remember the first occasion my mother and I lifted the quilt from our one hive. Both of us were armed to the teeth with veils, gloves and smoker, yet did not dare to disturb the brood chamber. It was in July, the limes were in full bloom, work was going on apace, and, as might have been expected, nothing happened in the way of stings, and this was undoubtedly foremost in the minds of both of us. We thereupon decided that bee-keeping was not so difficult as we had imagined. As the season advanced we had occasion to modify this view somewhat, until in the autumn we realised by painful experience that bee-keeping was not all honey. However, we persevered, and in 1899, on reference to my notes, I find that we were the proud possessors of seven stocks. I realise now that this was going much too fast. However, luck was with us, for all the colonies wintered safely, and during the following summer (1900) we increased to thirteen, besides taking 350 lbs. surplus. Now thirteen stocks for a youth without experience spelled trouble, and for the time being I had to confess being almost beaten. In my efforts to prevent further increase I had given shallow frame supers, mostly without excluders, with the result that they were used for brood rearing, and in consequence the stocks got so strong that I experienced great difficulty in handling them at the end of the season.

By this time we had suffered so much from stings that the bees were almost masters of the situation. My mother decided to quit and the bees were soon her sworn enemies, more especially after they had taken possession of a spare bedroom temporarily used as a honey room on a certain autumn morning.

It will be seen the critical period had arrived, and I am now quite certain that I would have given up the pursuit if I could have done so without having to acknowledge defeat. The novelty had worn off, interest was waning, and it required a real mental effort to force oneself to do even necessary manipulations. Through inattention winter losses were heavy during the next two years, bee literature was neglected and the reaction had set in. Previously I had joined the Kent and Sussex Bee-Keepers' Association (now defunct), and it was with a certain amount of diffidence that I awaited the expert's (Mr. Herrod's) annual visits. His reports were so encouraging, however, that I decided to study the subject more carefully and try to remedy my heavy winter losses, for I must confess the sight of several colonies absolutely starved touched my conscience somewhat, and I reproached myself for neglect.

I thereupon resolved that it should not occur again (nor has it to this day).

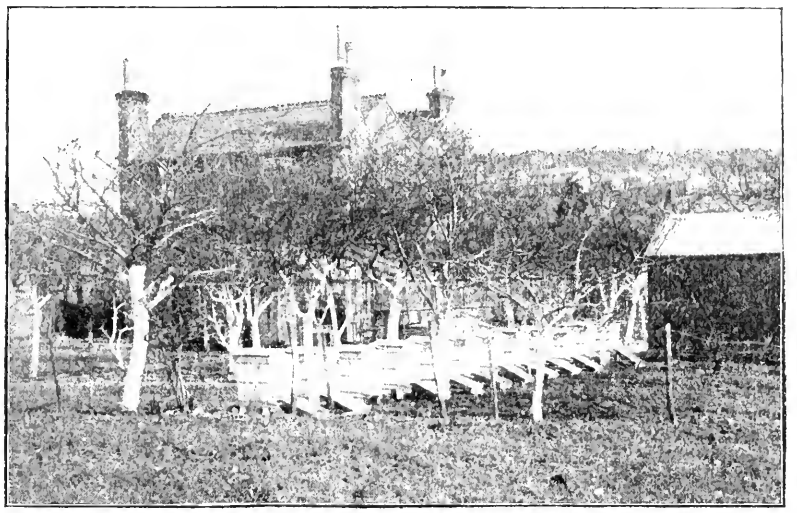
As soon as I settled down to study the subject in real earnest difficulties seemed to vanish, and it was not long before the hobby was responsible for a welcome addition to my pocket money. In 1906 I purchased a honey house from the proceeds of the apiary, and the following year joined the Crayford and District Association, which had just then been formed under the presidency of Mr. E. R. Stoneham.

In the various exhibitions and competitions organised by the Association I have been very successful, and the friendly rivalry which existed stimulated one to further effort.

In May of 1909 my first real set-back occurred. On arrival home from business one evening I found about a gallon of bees dead on the ground in front of the alighting boards of each of my eleven stocks, all unsealed brood dead, and probably not half-a-pound of live bees left in any one of the hives; and these were youngsters which could not fly. I was nonplussed, for I was on the point of supering. What could be the explanation? "Isle-of-Wight" disease, which was then just beginning to make its presence felt in the southern counties, suggested itself. By why the dead larvæ, and no recurrence of the trouble later? Neighbouring stocks had suffered in the same way, and as a result of further inquiries it was finally discovered that it was due to poisoning (a farmer near by having sprayed his fruit trees while in bloom with arsenate of lead). I was only able to make up three colonies from the remains, and by careful nursing increased these to six during the remainder of the season. To prevent a recurrence in subsequent years the apiary was temporarily moved out of the district during the period of spraying operations, returning in time to catch the main flow.

From this time all went well until two years ago, when by degrees every stock in the apiary succumbed to "Isle-of-Wight" disease, despite all efforts to find a cure. The epidemic had been gradually increasing in the north-west Kent district during 1912, continuing until the spring of 1914, when practically all of the original stock in this area had been wiped out.

After this experience I determined to wait 12 months before re-stocking. The accompanying photograph shows my apiary at Darenth as it appeared in the spring of 1912, having been just previously removed from a position about a mile further up the valley in the midst of the orchards of Kent. This apiary has now vanished, but I have, last season, recommenced on a very modest scale in another location.



MR. G. W. JUDGE'S APIARY.

For the past 12 or 14 years bee-keeping to me has been a source of real pleasure, and although I have experienced both successes and failures I am much gratified at the results attained.

Photography is also another of my "weaknesses," and it must be admitted the two go well together.

In 1909 I was fortunate enough to secure the British Bee-Keepers' Association third-class certificate, and in the following year the second-class award. The first is yet to come. I have had the honour of serving as a delegate from the Crayford Association

on the Council of the British Bee-keepers' Association since 1911 until this year, when I was elected a member of that body at the last annual meeting.

My experience both as a Member of Council and as hon. expert of the Crayford Association has enabled me to render a certain amount of assistance to other bee-keepers. This has proved a great source of pleasure in past years, and my only regret is that the present abnormal circumstances will not permit as much time being given to practical work as I have been able to give in the past.

To me, bee-keeping as a hobby has proved most attractive and fascinating. It keeps one occupied not only during the summer months but also in the winter if one follows up other phases of the subject; for instance, bacteriology, and the study of bee diseases, lantern slide making, lecturing, etc., etc. Some of the most pleasant winter evenings I can remember have been spent with the microscope, either dissecting or mounting some refractory organ of the bee.

With the spring, outdoor work demands our attention, and this is what many who follow sedentary occupations need. There are always a hundred and one things to be made, from entrance slides to observation hives, and even if one is not a first-class joiner it gives one an opportunity to develop one's faculties and to accustom oneself to the use of tools. I find it cheaper and quicker to make than to buy many appliances, and at the same time it tends to keep one fit.

As one who has been through the mill, my advice to others is to procure all the text-books on the subject and study closely not only the practical side but also the anatomy and physiology of *Apis mellifica*, upon which Mr. Cowan so excellently treats in "The Honey Bee." The result is usually a craving for more knowledge and the realisation of one's own shortcomings.

GEORGE W. JUDGE.

Notices to Correspondents

E. HAWKINS (London, S.W.).—*How to Make a Hive.*—We have an illustrated leaflet on how to make a hive, reprinted from THE BRITISH BEE JOURNAL, post free 1½d. Fuller instructions are given in the "Practical Note Book," post free 1s. 1d. from this office.

C. R. J. (Dorset).—Both insects were queen wasps.

WORKMAN (Ayrshire).—(1) Yes, safe arrival is guaranteed. (2) This query is rather vague. If you mean from the new queen about three weeks after introduction if bred artificially. (3) We still prefer natives. Italians withstand "Isle of Wight" disease better than natives, for a time. (4) Particulars have been forwarded.

Suspected Disease.

BOMB SHELL (Fife).—The bees are suffering from "Isle of Wight" disease, but not seriously at present.

H. E. (Smethwick).—The bees have been dead too long for diagnosis. The symptoms point to "Isle of Wight" disease.

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices (not exceeding 7 lines) in this column, 10 lines charged 3s. 6d., up to 15 lines 5s., which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

June 27th to July 1st, at Manchester.—Royal Agricultural Society's Show, Bee and Honey Section, under the direction of the B.B.K.A. Prizes arranged in groups of counties for Associations affiliated to the B.B.K.A. Schedules from The Secretary, 23, Bedford Street, Strand, W.C. **Entries close June 5th.**

Special Prepaid Advertisements

Two Words One Penny, minimum Sixpence.

Will advertisers please read these Rules carefully in order to save trouble, as they will in future be strictly adhered to.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not permissible at above rate, but will be inserted at* 1d. *per word as* "**Business**" *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of* 3s. *per* ½*in., or* 5s. *per inch.*

PRIVATE ADVERTISEMENTS are only intended for readers having **Surplus Stock** *to dispose of.* **Driven bees, Nuclei,** *and* **Queens that are reared or imported for sale,** *are Trade Advertisements, and can only be accepted under trade terms.*

Advertisements must reach us NOT LATER than FIRST POST on TUESDAY MORNING for insertion in the "Journal" the same week.

Orders for three or more consecutive insertions in "The Bee Journal" entitle advertisers to one insertion in "The Bee-Keepers' Record" free of charge.

PRIVATE ADVERTISEMENTS.

SITUATION REQUIRED by YOUNG MAN, aged 22 (militarily ineligible); lifelong experience with bees, horses, cattle, poultry, and gardening; total abstainer; Cheshire and Shropshire preferred.—Wages and particulars to M. L. S., BRITISH BEE JOURNAL Office, 23, Bedford-street, Strand, London, W.C. v 47

EUPHONIUM, instrument with music, instruction lyre, etc., 50s.; exchange for swarms or honey to amount.—WARD, Melbourne, Hales-owen. v 41

MR. PULLEN has had so many applications for swarms of bees that it is impossible to supply them all, or to answer all the letters. He desires to thank all would-be purchasers who have written.

FOR SALE, strong healthy stock of English Blacks, on ten standard frames, not swarmed this year, 20s.; also two empty W.B.C. hives.—DODD, Mildura, Clothorn-road, Didsbury, Manchester. v 40

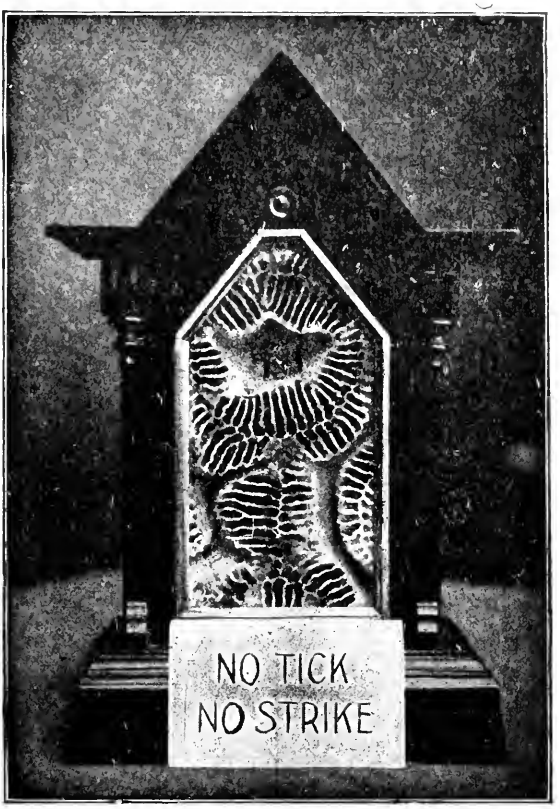
EXCHANGE extracter (good) for swarm of bees.—JOHN McINTYRE, East Calder, Midlothian. v 42

A SWARM wanted; price moderate.—PARKS, Ivy Cottage, Whitton-road, Twickenham. v 24

BEE-KEEPING APPLIANCES, including queen-rearing, etc., sale or exchange; great bargain. Stamp for list.—"Stallington Apiary," Blythe Bridge, Staffs.

PHOTOGRAPH of Comb in clock-case from which 7 lbs. of Honey was extracted. Seventy pounds were abstracted from the hive also. These Bees were badly affected by "Isle of Wight" Disease and treated by M. C. Pay of Croydon, and cured by IZAL washing, spraying and Izalized food. He had the hive given to him to be destroyed, May 24th, 1912, on which day he began his treatment.

"In IZAL they had placed in their hands a worthy and formidable weapon for battling against the bacillus."—*Sir James Crichton-Browne, F.R.S.*



IZAL is supplied by Royal Warrant to H.M. The King.

2 Teaspoonfuls Izal Fluid to 1 gallon of water for washing and spraying New Queen Bee inserted on June 12th, 1912.

In September 77 lbs. Honey taken from them. At present, June, 1915 descendants of the original diseased bees are quite healthy.

IZAL

is a Reliable Remedy against Foul Brood.

Sold Everywhere in Bottles, **6d.** & **1/-** each.

Ask for full details of IZAL treatment sent post free by

Newton, Chambers & Co., Ltd., Thorncliffe, nr. Sheffield.

THE FIRST COUNTRY TO *ADOPT* A STANDARD FRAME.

In his letter on this subject on page 164 of the BRITISH BEE JOURNAL for May 25th Mr. Hopkins is wrong in his surmise that it was a long time after the Standard frame was adopted that it came into general use.

At the annual meeting of the B.B.K.A., held on February 15th, 1882, it was decided unanimously "That it is desirable that the B.B.K.A. do set forth a *Standard frame*, stamped by its sanction and authority, with the view to bringing such a frame into general use, its size and form to be determined by a committee appointed for that purpose" ("B.B.J.," 1882, p. 224).

On the 15th March following the Committee met and decided on the size of the frame, and that "Pattern Standard frames duly stamped and labelled may be obtained at 1s. each upon application to the Assistant Secretary" ("B.B.J.," 1882, p. 246).

Mr. Hopkins quotes Mr. Abbott correctly, only he is in error in supposing that it was 20 years before the Standard frame was generally "adopted" in England. On the contrary it came into general use very rapidly, as the manufacturers at once took it up with very few exceptions, and at the bee and honey shows the schedules stipulated that hives with Standard frames should be shown. Moreover, those who stuck to other sizes found that they had to have frames and extractors and other parts of hives as well as foundation made specially for them, which entailed extra cost, so that bee-keepers were not long in realising the advantages of the Association standard.

The transition was rapid, for it may be noted that up to that time by far the largest number of frame hives in use were those of the "Woodbury" pattern, and the Standard frame adopted was one which with a slight modification of the hive could be used in the "Woodbury." Although the Woodbury hive was in use for upwards of 20 years previously, and had practically from its preponderance become a Standard, it is a matter of fact that this country was the first to officially adopt a "Standard frame."

A CRUSADE AGAINST WASPS.

Following on the plague of wasps last year, queen wasps have been very much in evidence this spring, in all parts of the country. We saw one in Fleet Street, London, only a few yards from Ludgate Circus, a few days ago, and wondered where it hoped to find a suitable nesting place in the heart of London. Our readers will no doubt remember the Peterboro' and District B.K.A. offered a prize to the person killing the greatest number of queen wasps during a month. The result has just been announced.

A letter from the Secretary of the Peterboro' and District B.K.A. will be found in our correspondence columns.

The Dutch stocks of bees brought into the district are going strong, and there are now several young Dutch queens being raised.

HIVING WILD BEES IN THE MID-WEST.

By Felix J. Koch,
Hearne Ave., Avondale, Cincinnati, O.

Somehow or other there always seems to attach to hunting for wild honey a certain savour of old pioneer times—a lurking reminiscence of the days when the pioneers would sally forth, entowelled, by way of mask, and hands encased in coon-skin gloves to take the wild honey from the bee-tree.

Even as civilisation crowds sharp upon the countrysides and as field and forest turn to city, or suburb, or town, one may still look for the bee-trees; for even the best-regulated domestic bees will swarm now and then, and, swarming, obey Nature's instinct to seek the woods, then some desirable tree and a home there.

Round about Gubser, in the section of North-Kentucky suburban to Cincinnati, bee-trees, latterly, have become especially numerous, and taking the bees has netted not a little to the farmer-boys, who bring these spoils to the Queen City apiaries to sell.

Coming on a bee-tree out in the woods, the first step in the process of securing the treasure-trove is to cut down the tree. The trunk is then split open at the point where the bees may be located; this is to be known, of course, by the hole through which they enter and leave.

Within, the giant comb is then exposed, nor, as a rule, will the bee-hunter tarry to admire, but, instead, he proceeds forthwith to cut this comb to the sizes of an average bee-hive frame. As cut, each comb will be tied to such frame with cord; the bee-hunter cutting piece upon piece until all his frames are filled. Meanwhile, not a few of the bees will be flying

madly about, striving to sting the rash intruder of course, but one may rest assured that they won't go very far, for the bee-brood is in that comb, and as each combs, the bee hunter seeks to find the queen bee. Even though he finds she has been lost to him, his next step is to insure the taking of the other bees. As already

A BEE-HUNTING PARTY IN THE MID-WEST.

THE BEE TREE.

of these bees is an abortive female, the mother-love that runs strong through all the animal world keeps her faithful to her charge.

Meanwhile, even as he works with the suggested, they will follow the brood; and so he takes the brood, with the honey along to the most convenient point for the new hive, *pro tem.*

That is to say, the brood is put into a

new, artificial hive here, and this, then, is permitted to stand near the old tree.

With the refuge thus made ready, the bees who are not yet in the air are smoked out of the parent tree. Where men desire the honey only out of the tree, without the bees, sulphur is often used as the quickest means of routing the bees; but this is fatal to the insects and so not to be employed when the bees are desired.

Once the bees have left the tree, one is free to take the honey, the actual treasure-trove, to most bee-hunters' minds. Honey there will be in plenty to eat, sometimes, especially if it be an old bee-tree, anywhere from a hundred to four hundred pounds of honey are to be had. This honey is, of course, quite as good as that from the domestic hives, being gathered from the same kind of

WATCHING THE BEES.

THE COMB.

flowers, and will bring in the nearest city from eight to ten cents the pound.

Honey out and off for sale, the bees still invite attention. These wild bees may, of course, be identical with the domestic bees, being an escaped swarm, as has been suggested. Again, they may be a cross between the commoner honey-bee and an Italian variety, a mating of some escaped fugitives, and, more often, they will be wild bees, descendants, untamed, of the wild bees the pioneers met, and that were in the West before Columbus came. These last, then, will be found to be a black bee, distinctly different from the rest.

Professional bee-hunters, on the mid-western hills, are wont to keep their weather-eye out for such bees, capture and hold them just a few moments, long enough to interrupt their foraging, when the bee, fresh released, will fly squarely for her home—the origin of the popular "bee-line"—and give clues of its whereabouts.

Meanwhile, though, as stated, the new hive is left by the lucky bee-hunter near the old tree; it remains there perhaps a week in all. The bees scent the honey, if not otherwise cognisant of the brood within, they need a refuge, since the old tree is gone, and, in a very little time, they will have entered the new hive and established themselves there.

Not alone that, but within a week, the bees will have fastened the combs to the frames in their own wise and the hive is good as done.

Once this stage is reached, the apiarist looks through the combs to make certain he has the queen bee. Such queen might have been injured, or even killed in the work, or might have escaped; if there be no queen, the man takes steps to secure one at once. Sometimes he may take a queen from another hive of his own; more often, he buys one, and good queens will range at from one to five dollars here. Even though there be no queen, those other bees will not leave their brood; but a queen there must be to keep up the hive.

So established, the wild bees will continue their work in the new hive, as they did in the old tree. No, the apiarists state, they don't yield MORE honey here, but it is easier to get at: otherwise one might have left them in the tree, and loot this, as desired.

More often than not, once fully established thus in the new hive, the bee hunter will sell the colony, and a swarm of bees of fair size, thus in shape, will net from five to eight dollars at least.

The photos show the bee-hunters at work near Gubser, within easy ride of Cincinnati.

CORRESPONDENCE.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

THE SPIDER AND THE BEE.

[9281] I witnessed an interesting sight in an outhouse the other day. A bee got entangled in a spider's web, cunningly placed along the lower frame of the window and half-way up one side. Darting out of its nest, the spider first seized the bee by a wing, and then by the tip of one of its antennæ, holding on grimly. Gradually the movements of his prey became weaker and weaker, until, at the end of two or three minutes, they ceased altogether, and, to all appearance, the insect was dead. (I judge from this that the antennæ are vital parts of a bee.) The spider then shifted his hold to the root of the "feeler," and pulled the bee an inch or two towards the nest. Tired by his exertions, he retired to his den to recuperate, and then renewed his efforts, seizing in his powerful mandibles both antennæ this time, and dragging the bee to the mouth of the nest. After vainly attempting to get the bee into his parlour, he realised that there was not room for a victim larger than himself, so he allowed it to hang within easy reach. Next morning I discovered the spider in the act of taking a hearty breakfast from the abdomen of poor *Apis mellifica*. I touched him with the point of a pencil, and he ran (a little cumbrously, I thought) into his private chamber. The bee was merely an empty shell. Now, Mr. Editor, can you tell me the name of that spider? It had a fat body, with long, yellowish, octopus-like legs. And am I right in assuming that a bee may be killed by nipping or dragging at its antennæ?—A. C. WILLIAMS.

[It is impossible to give a name to the spider without a fuller description or a specimen. The frontal claws of the spider are terminated by a movable hook, which curves downwards and has on its under-side a little slit for the emission of a poisonous fluid, which is secreted in a gland of the preceding joint. It is with these claws that the spider paralyses its prey, and when you saw it it was operating on the vulnerable part of the bee's body, the chitine at

the base of the wings and at the juncture of the antennæ with the head being very much thinner and flexible at the joints.—EDS.]

PETERBOROUGH AND DISTRICT BEEKEEPERS' ASSOCIATION.

[9282] The scheme for thinning down wasps by the above Association proved a great success; over 11,000 queens were brought in. The first prize winner killed 1,132, the second 1,080, and the lowest prize 165, and many more killed over 100. This should reduce these pests this summer. One interesting card was sent in with 111 queens pinned on, and four nests in various stages. I have not heard of any outbreaks of disease so far this season, and reports state bees are very strong and a good few swarms recorded, but many have absconded. One beekeeper has supers nearly ready to extract. The Association are buying three swarms this year, which have been drawn for by members who lost their bees through disease, and it is hoped to raise sufficient funds to buy a dozen next spring, to be drawn for at the annual meeting.

L. ANDREWS, Hon. Sec.

EXPERIENCES WITH "ISLE OF WIGHT" DISEASE.

[9283] My bees are all dead of the dreaded "Isle of Wight" disease! I am very sorry for this, as I have a great love for the bees. What a lovely, long, and learned word is "Microsporidiosis!" What a shelter that word is for the careless beekeeper. Not that *I* was careless; indeed, I consider I was *over-careful*: when I looked them through for the winter the first week of October, I was so very anxious that they should have abundant stores that I left them ten frames with lots of honey. Alas! there seems to have been my fault; that early and extremely frosty weather of November came, and I judge it decimated the wintering bees at once; and how could they keep warm on *ten* frames? There was, however, nothing to show amiss till February 21, when my suspicions were awakened, such a lot of dead bees thrown out and such smelly voidances. I sprayed the flight board with Izal, and cleared entrances and murmured "Microsporidiosis" in the correct Scotch way, *i.e.*, ending the word on a high treble note! No fault of mine, of course. Oh, no! It was the planont; it was the meront; it was the Nosema spore doing its deadly work! But March 24 came, and a day when I could thoroughly examine, and I came to the conclusion that I was to blame! Had I wintered them on five frames, full of honey, my thought is that the dreaded disease would never have made its appearance, but being starved with cold they fall victims to "Isle of Wight" disease or any other that is going about; they seemed to have just lived the winter through on the four centre frames, as there they could cluster and be warm; the outer frames with abundant stores had not been touched.

In 1887 I was a farmer and had many stocks of bees, and I got a beautiful extractor from C. N. Abbott. How nicely it worked, and what a lot of honey I got that summer! But the next spring what a sad tale after a keen winter; stock after stock perished; it was called "Spring dwindling" then, and how ashamed I felt that I had taken undue advantage of the bees who had worked so well for me. I would like to ask a question, "Is it not a fact that when you turn up a skep full of combs and bees, there is often, if not always, seen a kind of kink in the combs—they do not all run straight from side to side as in a frame hive? If that be so, is it not Nature teaching the bees so to do, to be more protected from *cold draughts in the winter*?"—A. F. R.

AN OLD RECIPE FOR SYRUP.

[9284] I found the enclosed cutting from *The National Magazine* the other day, and thought it might interest and amuse bee-keepers of the present time. Sorry I cannot give you the date, as the magazine cover was destroyed before I found the leaf, but I think it was about 1870.—VICTOR M. BROWN.

PRESERVATION OF BEES.

The winter is a season of trial to bees, even under the best of circumstances. Their numbers decrease, and their stores decrease, and many a fine stock perishes from causes that cannot be ascertained. Where bees are kept, the greatest circumspection is necessary at this time of year, in order to tide them over safely to the spring; and the worst season is yet to come, February and early in March being the periods most frequently fatal to them.

The bee-keeper should now look over his stocks, and form an estimate of the general state of things. Stocks which have been fed up to the present time must be fed very assiduously until the honey-season has fairly commenced; and many of those that have not yet been fed will be found so light as to require it. When feeding has once been commenced, it should not be discontinued till the currant-trees are in bloom.

Bee-food is the most important matter the apiarian has to consider in winter; for where the stocks are numerous, feeding is rather an expensive affair. The best food is honey, and best feeder is a piece of clean comb. But honey is dear, and syrups of some kind or other usually take their place. If the apiary is provided with feeding-pans, and liquid food be preferred, that recommended by Mr. Taylor is unquestionably

the best. To make it, use good sound ale and loaf-sugar, in the proportion of a pint of ale to every pound of sugar; boil for five minutes, and then add for every pound of sugar a tablespoonful of rum.

Liquid foods are, however, fast going out of use; for experience has satisfactorily proved the superiority of *solid food*, when properly prepared. Take loaf-sugar, and to every pound add a gill of water and a tablespoonful of good vinegar. Boil for about thirty minutes, or until a little of the boiling liquid dropped into cold water becomes instantly solid. Then pour out the preparation on a marble slab or dish, previously smeared with oil or butter; and as soon as it is sufficiently hard, cut it into strips of a convenient size for insertion in the mouth of the hive. If the liquid does not quickly solidify, or if it shows the least tendency to crystallise, return it to the pan and boil it up again. It should be quite solid, so as to bear handling, and be free from any tendency to candy. It is barley-sugar in a pure form; and though you may purchase barley-sugar ready made, it is usually flavoured with lemon, or some other objectionable matter obnoxious to the bees. I made my first trial of this food last spring, and this winter have used no other food. The saving of time and trouble is immense; feeding-pans are quite unnecessary: there is no occasion for shifting or altering the hive-cover; and robber-bees are never attracted by it, as is always the case when honey or sugared mixtures are used.

But many bee-keepers will adhere to old-established rules; and for the benefit of those who have experienced the difficulties and dangers to the stock arising from the use of liquid food, I will suggest a mode of feeding which I used to practise years ago, when barley-sugar had not been thought of. I used to procure a few rods of elder-wood, of about an inch in thickness. These were cut up into lengths of four of five inches; then split, and the pith removed, and each end stopped with a piece of cork, cut to fit, so as to form a shallow trough, that could be inserted in the entrance, and filled every evening from a can with a very thin spout. For occasional feeding, as after hiving a swarm, or during sudden trials of weather in spring, such a simple feeder would often prove the saving of a stock.

Sunshine is a frequent cause of injury to bees at this time of year: and the hives should be shaded by means of squares of wood fixed to posts sunk before the hives, sufficiently high to leave the causeway open to the south. The shades should incline a little towards the west: for in winter the afternoon sun is the most powerful. Snow is another cause of death to bees. The glare of light, and the bright weather that frequently follows snow, tempt the bees out, and many perish of cold: hence, as long as the snow lies, keep them prisoners, with only sufficient room for admission of air; but as soon as the snow disappears, let the bees have their liberty again. To imprison bees for any length of time is ruin to them. SHIRLEY HIBBERD.

[The above refers, of course, to feeding skeps, and the article is headed by a woodcut of a skep, with an elder wood feeder in position, and also an illustration of the "bee feeder."—EDS.]

PRESS CUTTING.

BEES AND BULLETS.

LANCASHIRES' HOT TIME IN EAST AFRICA.

Durban, Undated.

The *Natal Mercury* publishes an interesting account of the difficulties confronting the British fighting forces in East Africa, furnished by an officer in the East African Mounted Rifles.

"Of the ingenuity of the Germans," he said, "there can be no doubt, as the following incident will prove. The natives have a device whereby they place hollow logs up in the trees to enable the bees to construct their hives, and from these the natives collect the honey. In one place the Germans tied a whole lot of these logs together and attached them to a wire in the long grass. They also invented a device which caused a white flag to jump up above the grass when anyone came into contact with the wire, this being the signal to them to turn a machine gun on to that spot. A party of Lancashires had the ill-luck to stumble over that wire, with the result that dozens of the bee hives fell to the ground, and up sprang the white flag, revealing their whereabouts. The poor Lancashires immediately had bees and bullets to contend with, and between the two they had a hot time."

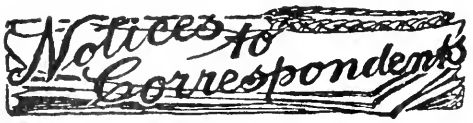
WEATHER REPORT.

WESTBOURNE, SUSSEX.

MAY, 1916.

Rainfall, 1.72 in.	Minimum on grass, 27 on 10th.
Below aver. .28 in.	Frosty nights, 0.
Heaviest fall .42, on 30th.	Mean maximum, 61.6.
Rain fell on 12 days.	Mean minimum, 45.0.
Sunshine, 214.5 hrs.	Mean temperature, 53.3.
Below aver., 21.5 hrs.	Above aver., 1.3.
Brightest day, 26th, 14.9 hrs.	Maximum barometer, 30.404 on 19th.
Sunless days, 1.	Minimum barometer, 29.329 on 5th.
Maximum temperature, 71 on 5th and 19th.	
Minimum temperature, 36 on 9th, 10th, 26th, and 27th.	

L. B. BIRKETT.



Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. All questions must be accompanied by the sender's name and address, not necessarily for publication, but as a guarantee of good faith. There is no fee for answering questions.

J. S. ANDREW (Tiverton).—*Driving Bees.*—There was an illustrated article on this subject in the RECORD for March, 1914, which we can forward for 2½d.

NEMO (Llanberis).—(1) Yes. Let it dry thoroughly before putting any bees in it. (2) No; it is too poisonous. (3) You have evidently misunderstood the statement. The coal dust is mixed with the refuse from the first lot extracted, and the mixture used as fuel when extracting the next batch. (4) We do not think you would be able to do this; it is laboratory work and would need a skilled chemist. If we can hear of a simple test we will let you know. (5) It was designed for use when driving bees from skeps to facilitate transferring the comb by tying it into frames. (6) That is so.

A. C. WILLIAMS (Edinburgh).—We cannot say without seeing some of the bees. Probably they have become coated with pollen. We do not think you need be alarmed.

MACC. HALL (Tenterden).—We cannot say without examination. It is not usual for drones to be killed at this season unless there is a spell of bad weather.

C. P. (Cheshire).—(1) 35s. to 40s. (2) A *full* stock generally consists of ten frames of comb. If there are a smaller number than ten a stock should be described as on, say, six or eight combs, as the case may be, and the number of combs specified should be occupied by bees. (3) We would expect ten good drawn out combs, a fair proportion of them new, and at least six combs nearly full of brood. Much would depend on the price paid.

Suspected Disease.

W. D. G. (Colby).—Most of the disease is sour brood with a little foul brood. If all the brood is in the condition of the bit sent, you had better destroy the combs.

G. H. BERROW (Stourton).—(1) The bees were so messed up with the food we could do very little with them, but from what we could see and the symptoms you describe the trouble has been "Isle of Wight" disease. Better not use the combs again, and disinfect the hive. (2) You will have to transfer eggs or newly-hatched larvæ. Why not have left them alone until the cells contained larvæ?

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices (not exceeding 7 lines) in this column, 10 lines charged 3s. 6d., up to 15 lines 5s., which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

June 27th to July 1st, at Manchester.—Royal Agricultural Society's Show, Bee and Honey Section, under the direction of the B.B.K.A. Prizes arranged in groups of counties for Associations affiliated to the B.B.K.A. Schedules from The Secretary, 23, Bedford Street, Strand, W.C. **Entries** closed.

Special Prepaid Advertisements

Two Words One Penny, minimum Sixpence.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not permissible at above rate, but will be inserted at 1d. per word as* **"Business"** *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of 3s. per ½in., or 5s. per inch.*

PRIVATE ADVERTISEMENTS are only intended for readers having **Surplus Stock** *to dispose of.* **Driven bees, Nuclei,** *and* **Queens that are reared or imported for sale,** *are Trade Advertisements, and can only be accepted under trade terms.*

Advertisements must reach us NOT LATER than FIRST POST on TUESDAY MORNING for insertion in the "Journal" the same week.

Orders for three or more consecutive insertions in "The Bee Journal" entitle advertisers to one insertion in "The Bee-Keepers' Record" free of charge.

PRIVATE ADVERTISEMENTS.

WANTED, secondhand Extractor and Ripener. —Full particulars to "G. B.," c/o BRITISH BEE JOURNAL, 23, Bedford-street, Strand, W.C. v 62

FEW cwts. dark honey for sale; suitable manufacturing; sample 3d.—CHARTER, Tattingstone, Ipswich. v 49

WANTED to purchase, a swarm of leather coloured Italians, owner must guarantee them free from "Isle of Wight" infection.—Particulars to MRS. WILKINSON, Lymm, Cheshire. v 51

TO CLEAR, five W.B.C. hives, 45s.; seven dozen standard and shallow frames, 35s. complete; all new and clean.—S. COCKS, Napton, Rugby. v 52

FOR SALE, six sections racks, with dividers and springs, healthy and good condition; 200 split top sections, lot for 10s.—H. C. TURK, Rivers Corner, Sturminster Newton, Dorset. v 55

SINGLE MAN, 31 (attested), seeks employment; 15 years' experience modern bee-keeping; assist expert or other duties.—A. T. S., BEE JOURNAL Office, 23, Bedford-street, Strand, London, W.C. v 56

SOLAR Extractor, slate, indestructible, size 22 x 17, offers, or exchange swarm Golden Italians or Dutch, guaranteed healthy.—HAULFRYN, Llanberis. v 57

FOR SALE, one strong healthy stock of bees, in good bar frame hive; also six good hives, clean and healthy, guinea honey extractor, cheap to immediate purchaser.—J. HALL, Fore-street, Salcombe, S. Devon. v 59

WANTED, five swarms, English or Italians.—WHITLAM, 9, The Grove, Normanton, Yorks. v 60

HONEY extractor for sale, Cowan, cog-gearing, handle at side, lids, 20s., in good condition; also 7lb. foundation (brood and super), 1s. 10d. lb., carriage paid, if bought with extractor.—McLAREN, Coscote, Didcot. v 61

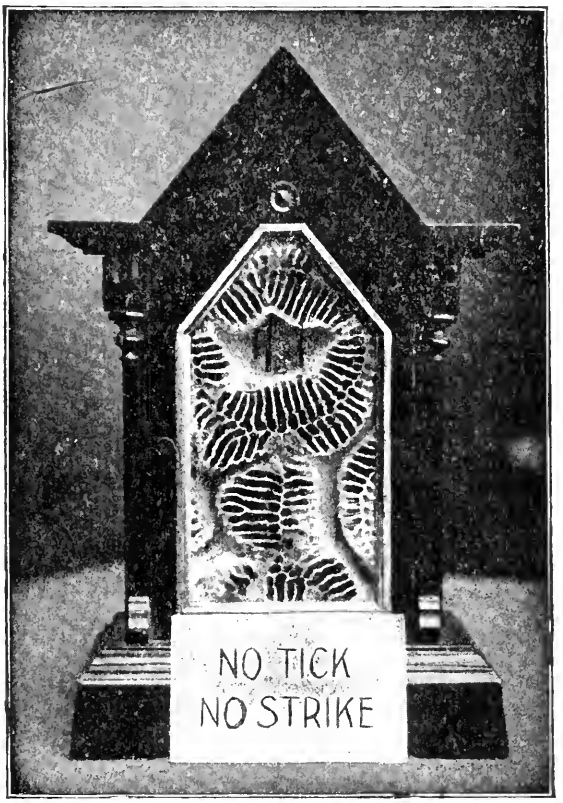
SITUATION REQUIRED by YOUNG MAN, aged 22 (militarily ineligible); lifelong experience with bees, horses, cattle, poultry, and gardening; total abstainer; Cheshire and Shropshire preferred.—Wages and particulars to M. L. S., BRITISH BEE JOURNAL Office, 23, Bedford-street Strand, London, W.C. v 47

WANTED, for educational purposes, piece of comb containing foul brood.—BRITISH BEE JOURNAL Office, 23, Bedford-street, Strand, London, W.C.

OWING to war removal all appliances of well stocked healthy apiary, for sale at half price, including clean drawn out combs; particulars on application.—DAY, "Brynmawr," Tile-Hill-lane, Coventry. v 44

PHOTOGRAPH of Comb in clock-case from which 7 lbs. of Honey was extracted. Seventy pounds were abstracted from the hive also. These Bees were badly affected by "Isle of Wight" Disease and treated by M. C. Pay of Croydon, and cured by IZAL washing, spraying and Izalized food. He had the hive given to him to be destroyed, May 24th, 1912, on which day he began his treatment.

"In IZAL they had placed in their hands a worthy and formidable weapon for battling against the bacillus."—*Sir James Crichton-Browne, F.R.S.*



IZAL is supplied by Royal Warrant to H.M. The King.

2 Teaspoonfuls Izal Fluid to 1 gallon of water for washing and spraying New Queen Bee inserted on June 12th. 1912.

In September 77 lbs. Honey taken from them. At present, June, 1915 descendants of the original diseased bees are quite healthy.

IZAL

is a Reliable Remedy against Foul Brood.

Sold Everywhere in Bottles, **6d.** & **1/-** each.

Ask for full details of IZAL treatment sent post free by

Newton, Chambers & Co., Ltd., Thorncliffe, nr. Sheffield.

A ROLL OF HONOUR.

Although bee-keeping is considered a minor pursuit, we venture to say that it has provided more fighting men than the usual average of any industry. To place on record the part the members of our craft have played in the present war we propose to make a "Roll of Honour," and shall be pleased if our readers will forward us the NAMES and ADDRESSES, together with the REGIMENT and RANK, of any bee-keeper serving his King and Country at home or abroad; also if killed or wounded.

We print a further list of names to those sent in, and shall be pleased to have other names as soon as possible.

Private F. Marshall, Ivy Cottage, Sutton-on-Trent, 2/4 Royal Scots Fusiliers.

BLURTS FROM A SCRATCHY PEN.

BEE-FEVER.

One of the most beautiful conceptions of Virgil, perhaps the most full of poetry, is his fourth book of the Georgics. Most bee-keepers know it, for it is that book which contains the fabled story of the steer, converted by the fierce rays of the sun into swarming bees; and, overmastered with the audaciousness of this myth, they pass by the other, and latter portion of the same book, wherein is related how the shepherd Aristæus, disconsolate at the loss of his bees, "by famine and disease," appeals to the nymph Cyrene, his mother, to "tear up my wealthy groves, bear hostile fire against my stalls, destroy my harvests, and wield against my vines the violent axe." She—mother-like—pets her wayward, passionate child, gives him a good dinner, and counsels him, by surprise, to bind the seer Proteus, a god who knows everything, and compel him to tell him the reason of his bad luck. Aristæus for once is obedient, and the old seer, after many attempts to get rid of his fetters, at last yields, and reveals the reason. Of course, there is a woman in it. Aristæus and Orpheus both happen to be enamoured with Eurydice, who, trying to escape from the former, dies from the bite of a snake. Hence the spite of Orpheus, who, as a god, is a little more powerful than the mortal. The final of the story is that Aristæus restocks his apiary from immolated steers, as in the method narrated in the previous portion of the same book.

All roads lead to Rome. Each of us has the habit of sometimes unconsciously perverting all things to his own idiosyncrasy. I do not attempt to be an exception to the rule; therefore, when thumbing my old friend Virgil, I again came across the above story, I thought it would answer as a very convenient commencement of my next "Blurt," more especially as there were one or two prominent projections in it which would serve as points, round which to rally the ideas which occurred to me. First and foremost, how badly poor Aristæus had got the "bee fever." How exceedingly interesting it is to think that others suffered just as badly from this disease so long ago. Of course, we sympathise with him because of his fever, and in his loss. I am not quite sure if I ought to say "sympathise" in his fever, because, wonderful to say, we rather like having this fever; we don't want to get cured of it, and we would not if we could. So therefore I think we don't sympathise with him; perhaps "fraternise" with him would be a better-chosen word. And the symptoms of the disease are very much the same, an overpowering interest in matters apiarian, but the method, with lapse of time, is very different. Then, poor Aristæus lost his temper, and like a spoilt child went to his mother to help him, now we help ourselves. We support (or rather some of us do) Bee Journals, Bee Associations, Royal Shows, etc., etc., and the others who do not feel called on to help in the spread-of-bee-education, work in their own quiet way, by devouring all available literature on the subject, and thus amassing to themselves a mountain of information. In some cases even, the delirium is shown by being tempted to write about bees and bee-keeping; this is a very acute stage, and leads to many extravagances and ravings.

Another "projection." Aristæus lost his bees, the poet tells us, by "famine and disease." Here is a crumb of comfort to be gathered up. They must have had disease, even in those days, and what disease? Evidently he had lost all his bees, therefore it must have been a contagious disease. Was it foul brood, or Isle of Wight? In all the old writers on bee-keeping, from Aristotle to Della Rocca, and from the latter even until the time when these diseases began to be the subject of special study, there is abundance of

evidence of the existence of both these diseases. The descriptions are so exact that, altering the dates, and some peculiarities in phraseology, they could be inserted in this week's JOURNAL as an account of someone's sufferings at the present day; and yet, in spite of these periodical epidemics, the race of honey-bees still exists. Is it, then, that in recurring cycles of years these outbreaks occur, wax, wane, and have their end? Judging from the present outbreak of "Isle of Wight" disease, it would seem like it. Personally, the cases I have met with this spring in the South are exceedingly few. I take it that now the epidemic has exhausted itself. The fittest have survived. Among the higher animals these outbreaks of plague have always appeared at irregular intervals, have had their course, and gone. Science has done much to abate their virulence, and it is possible the investigations we have been obliged to make lately, may have the same result in beekeeping.

Still one thing more. Aristæus refilled his empty hives of earthenware, or straw, by a method which we should not attempt to follow; even if the value of the steer did not prevent it. But we want also to repopulate our vacant apiaries. How may we do it? At the moment, we have so many other more pressing considerations that it must stand aside. Yet when the sword has given place to the scythe, it is one of the things we shall have to take in hand.

J. SMALLWOOD.

QUEEN-REARING AND INTRODUCTION.

(*Continued from page* 170.)

For late mating, drones can be kept in a queenless stock; when in this condition they will often be allowed to live right through the winter.

Under natural conditions a large number of drones are reared. This appears to be a waste of energy when we consider that only one is required to mate each virgin, and that mating, once accomplished, lasts for life. The queen is strong and swift upon the wing; therefore, in the pursuit of his mate, only the most vigorous drone wins, transmitting his vigour and hardiness to his progeny—a clear example of the law of the survival and perpetuation of the fittest.

Drones are attracted to the virgin by scent; this can be proved by hanging up an empty queen cage which has been occupied for a little while by a virgin about five days old. It will be a source of attraction to drones for several days.

Another reason for the rearing of an abundance of drones is that the queen may be mated as soon as possible and return to the hive, where she will be secure from bird enemies, which may, perchance, snap her up. The danger of this is very great if the wedding flight is a protracted one.

Bad weather for a succession of days may delay the flight of both queen and drones. Normally, a virgin ought to be mated and laying within a week after emerging from the cell; and, although I have had virgins mated when three weeks old, it is best to kill off all those which are not mated and laying at the end of a fortnight, for, as a rule, these are unsatisfactory mothers.

Further, if the queen is not mated at all, the stock is reduced to the same condition as one containing a laying worker. She will lay, but the absence of the seminal fluid obtained from the drone will cause her to lay unfertilised eggs only. Although these are laid in worker cells, drones will be reared. Instead of the cappings being slightly raised, as on worker brood, they stand out prominently as in normal drone brood. The cells are elongated irregularly, so that the comb has an uneven surface, even after the brood has emerged, as will be seen at Fig. 78, which is a shallow comb in which brood had been reared, taken from a super where a

virgin was imprisoned by the queen excluder, and prevented from getting out for mating. These diminutive drones are fully developed in all their organs, but it is quite obvious that they should not be allowed in the apiary to fertilise queens—which they are quite capable of doing—as the result of such a union would be scrub stock.

Even with a drone breeding queen, it will often be found that the bees endeavour to remedy the fault and build queen cells round the male larvæ, as seen at Fig. 79. On the left the whole comb is seen with drones being reared in worker

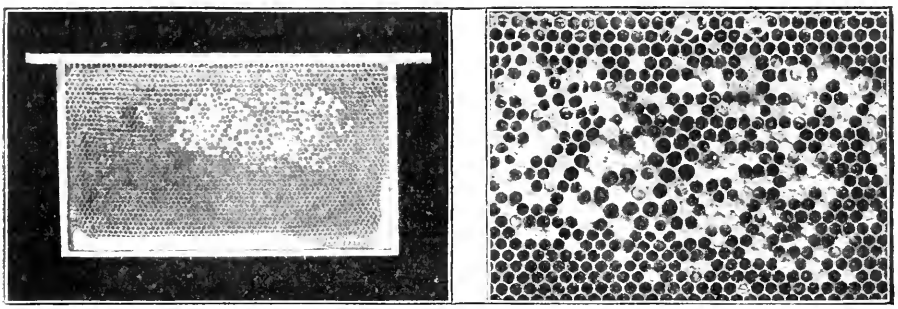


Fig. 79.

cells, while on the right a closer view of the brood shows queen cells recently completed.

If bad weather supervenes, or there is an absence of flora through drought, or lateness of the season, then both the queen and drone-rearing stocks must be fed.

Having reared good queens and secured their fertilisation, the next thing is to get them safely introduced to the colonies that they are to mother. Inattention to small details in this operation may cause the waste of much labour and time expended in the rearing of queens, and also great loss in bee-life through the stocks which have been prepared for their reception remaining queenless and therefore broodless for varying periods.

The best time to re-queen under ordinary circumstances is in the autumn, immediately after the supers have been removed, and not in the spring, for three

Fig. 80.

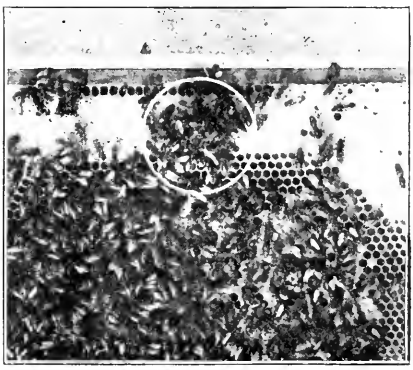


Fig. 81.

reasons:—(1) If it is necessary to purchase queens for the purpose, they are more expensive in the spring, on account of scarcity, than in the autumn, when dealers have, as a rule, a number of surplus queens on hand, which, if not cleared, will be wasted through the difficulty of keeping them through the winter. (2) The most important time for egg-laying is in the early months of the year. Queens commence to lay about the last week in January. At the earliest queens cannot be introduced

until April, so that if the operation is delayed until the spring, at least two months of the most valuable time in egg-laying by the new queen is wasted. (3) By introducing immediately after the honey harvest, observation can be kept for a time upon the work of the new mother, and if not satisfactory, there is time to remove and replace her with another.

There are, of course, exceptional circumstances which call for the introduction of queens at other times, such as the death of a queen, either from natural causes or by accident, when manipulating.

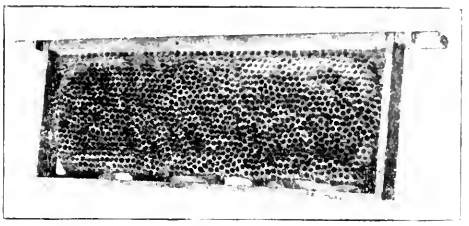


Fig. 78.

Fig. 82.

Bees recognise each other by smell, therefore if placed amongst her new subjects straight away it is possible, nay, almost a certainty, that she will be killed by balling, *i.e.*, the workers cluster round her in a ball, either on the floor-board, Fig. 80, or on a comb, Fig. 81, in centre of white circle, until she is suffocated. Both are photographs from life. Fig. 80 was taken after the brood-chamber had been lifted off the floor-board. Not only will they suffocate her, but I find that the workers will maim the queen, as is seen in Fig. 82, which is the actual queen taken from the ball (Fig. 80). At the end of half an hour mutilation of the wings and legs had taken place, portions of these members having been amputated.

Fig. 83.

When balling is observed, either on the face of a comb or on the floor-board, remove the cluster. Do not try to pick off the workers, as this is well-nigh impossible without either the queen being killed immediately by the workers stinging her or a number of stings being inserted in the fingers and thumb of the operator owing to the bees adhering very tenaciously to the queen, as seen in two separate cases (Fig. 83). If possible, the ball of bees should be dropped into water, when they will separate; or, it will be just as effectual if the ball is placed on the ground and whipped with a small bunch of long grass; or a strong volume of smoke driven from the smoker on to the cluster will sometimes cause them to disperse. The latter methods have the advantage of the necessary appliances being always ready to hand. In all cases when balling takes place, the queen should be caged alone on a comb in the hive for at least twelve hours.

The balling of a queen will take place occasionally for no apparent reason upon the first manipulation in the spring and also if a queen is endowed with a fresh odour through too much handling, so that it is well to investigate at once any small cluster of bees within the hive.

(*To be continued.*)

HONEY RECIPES.

CAKE WITHOUT SUGAR.

Sugar, too, seems an almost indispensable ingredient of cake; yet with thick honey on hand, a delicious cake may be evolved. Cream until very light half a cupful of butter, and add, a little at a time, $1\frac{2}{3}$ of a cupful of thick honey. Have two eggs beaten lightly, add these to the butter and honey with one teaspoonful of caraway seeds (these, of course, may be omitted) and two teaspoonfuls of baking powder sifted with two cupfuls of flour. Beat the batter well, turn into a ring mould that has been well greased and dredged with flour and bake about 35 minutes. Ice when cold with a lemon frosting.

VIRGINIA HONEY MUFFINS.

Beat one egg well and mix in half cupful of milk, $1\frac{1}{2}$ tablespoonfuls of melted butter, $\frac{1}{2}$ cupful of honey, $1\frac{1}{2}$ cupfuls of flour sifted together with two level teaspoonfuls of baking powder. Bake in buttered muffin tins for 20 minutes.

HONEY FLUFF.

Three cupfuls of granulated sugar, $\frac{1}{2}$ cupful of strained honey, $\frac{1}{2}$ cupful of water, one teaspoonful of lemon extract, and whites of two eggs.

Boil together until the mixture hardens in cold water, then pour it slowly over the well-beaten whites of two eggs. Flavour and beat together until stiff enough to drop on buttered paper. One cupful of chopped nut-meats may be added.—*Good Housekeeping.*

MINE-SWEEPING FOR BEES.

I have often heard bees called stupid because they will not remove growing grass before their hive and will let it get up a smother that makes entry practically impossible. Wasps, on the other hand, will cut down every blade as it tries to grow and preserve a clear tunnel through the thickest hedge right to the doorway.

The fact is that wasps, building in the ground, have had this difficulty to contend with ever since the world began and have learnt how to meet it, while bees do not naturally build in or near the ground and cannot be expected to anticipate this trouble. It is our duty, if for our convenience, we put the hives among growing grass, to see that it does not encroach.

Bees, in their high tree, have other difficulties, among them, no doubt, spiders, that will spin their webs among the branches, and so we see that they do not tamely submit to this nuisance when it assails them in the modern apiary. I see them every day doing their best to break the web of a spider that I have not yet been able to catch, that spins on the front of a weak hive. They act like philosophers experimenting with drink. The object seems to be to get caught lightly and thus to destroy the net in breaking out. If one gets caught too strongly, another goes to the rescue. I fancy that if the spider were to run down on the open web a bee would catch her and carry her off. They seem to be hawking up and down in the hope of discovering the core of the nuisance. But they have to deal with an artful spinner that has so far defied them and me. This mine-sweeping of theirs is a dangerous business, from which I expect they do not always come off scot-free.—G. G. Desmond.

THE BEE PIRATES OF AFRICA.

A recent number of the *South African Beekeepers' Journal* devotes much space to the habits of the bee pirates, notes upon which may interest our readers.

The bee pirates are digger wasps. Two species are given as destructive to the bees. Other species are common in America but are not referred to as enemies of bees, since they capture other insects which are taken to their burrows to furnish food for the larvæ. One of the African species is said to catch the bees on the flowers, while the other catches them more frequently at the hive entrance. As many as 400 pirates have been captured around one hive. It will be apparent to the reader that such a pest must be very serious in the apiary. It is not an easy matter to deal with such a nuisance. About the only effective methods are swatting them by hand as they fly about the hives or setting traps. Two kinds of traps which have proved effective are described. Covering branches of trees with bird-lime and placing them near the hive is one of the methods described.

When a pirate alights on the branch its feet are held by the sticky matter, such as "tanglefoot" in catching flies. A white plate or basin filled with water and oil is also recommended. The plate method is said to be the simplest and most effective way of fighting the banded pirate which comes to the hive to capture its prey. Some bees also fall into the water, but the number is small compared with the number saved from the pirates destroyed by the traps. Paraffin is given as the best oil for the purpose. No method has as yet been devised for catching the species that capture the bees afield as their habits are such that very small numbers could be caught by any trap.

The pirates are not large insects, measuring but little more than half an inch in length.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

FLOUR AS A REMEDY FOR "ISLE OF WIGHT" DISEASE.

[9285] "I am writing these few lines in the hope that they may be of some use to your readers whose bees are suffering from "Isle of Wight" disease. The disease has been in this district about two years, and to my knowledge has killed the bees in about 250 hives; people who kept 30 to 50 hives of bees have lost them all. A bee-keeper told me the other day he had increased to 110 stocks but has only 10 left. My own bees commenced to die off last autumn. The symptoms varied in different hives; in some the bees never left the hives but remained dormant on the combs and died so, others showed the usual symptoms—discharge on the alighting board, crawling about, falling on the ground, and dying by hundreds. I tried advertised and other remedies, without any good result. My last lot, having all the usual signs of "Isle of Wight" disease I decided to try a remedy of my own. Having known flour and water to be given to people suffering from diarrhœa, etc., with good results, I thought it might be good for the bees. Knowing they would not take it in liquid form, I got a small tin (½ lb. mustard tin), removed the lid and punched a number of holes in it, filled the tin with flour and replaced the lid, so as to make a dredger. I then opened the hive, removed the back comb, pulled the other nine back so as to leave an empty space in front. I took out the front comb, bees and all, dredged them well with flour and replaced it in the proper place in the front of hive, treating all the others in a like manner. I then dusted the last comb and replaced it. I repeated this four times, at intervals of two or three days.

After the second application there was less discharge on the alighting board, and the bees seemed stronger; after the fourth not a crawler was to be seen, and no discharge on board. Now there is plenty of brood, and the bees are working well in the supers.

As this costs so little to try, and if it only saves the bees for one season, it is well worth the trouble.

I forgot to state that I used pea flour the last two applications. I should advise its use in place of wheat flour, as it works better.—FRANK COE, Wisbech.

Queries reaching this office not later than FIRST POST on MONDAY MORNING will, if possible, be answered in the "Journal" the following Thursday. Those arriving later will be held over until the following week. Only SPECIALLY URGENT queries will be replied to by post if a STAMPED addressed envelope is enclosed. All queries must be accompanied by the name and address of the sender, not necessarily for publication, but as a guarantee of good faith. Correspondents are requested to write on one side of the paper only.

TESTS FOR NITROGEN IN SOILS.

[9048] *Re* illustrations on Page 68 for March 2nd, 1916. What are the tests for nitrogen in soils?—NEMO.

REPLY.—Nitrogen exists in soils in the form of organic matter (undecayed) as a nitrate, or a nitrite, or as ammonia. The character of the crop produced is usually an indication as to whether a soil contains sufficient nitrogen or not. The estimate by chemical means of the exact proportion of nitrogen in soils is a complex process. Usually the results are stated in terms of ammonia thus=to ammonia, or *vice versa*. One way of estimating the amount of organic matter is to heat a weighed quantity of prepared dry soil to low redness, and continue heating until all blackening has disappeared, allow to cool, moisten with ammonium carbonate, re-heat and weigh. The difference in weight represents organic matter and combined water. Ammonia may be tested for by washing some soil, filtering the washing water until clear, and adding Nessler's solution. The depth of the brown tint obtained represents, roughly, the amount of ammonia present. To test for nitrates or nitrites, add a crystal of ferrous sulphate to some of the clear soil solution.

then holding the test tube slantwise pour some strong sulphuric acid down the side of the tube. A brown ring will appear if nitrates or nitrites are present. Another method of detecting ammonia is to heat a weighed mixture of soil and soda-lime, and lead away by means of a tube the ammoniacal vapour given off. If hydrochloric acid gas is then introduced, dense white fumes of ammonium chloride will be observed. For a complete quantitative estimation of nitrogen costly apparatus and considerable experience and manipulative skill are required.

Notices to Correspondents

Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. All questions must be accompanied by the sender's name and address, not necessarily for publication, but as a guarantee of good faith. There is no fee for answering questions.

W. PARSONS (Lincoln).—We should say you are quite right in your deduction.

A NOVICE (Wilts).—Try giving the syrup warm. The symptoms you describe point to "Isle of Wight" disease. As this disease attacks the *adult* bee it often happens that a swarm exhibits symptoms several weeks before they are seen in the parent stock.

S. BERRY (Chacombe).—We doubt whether you will be able to save them. Make a solution of one teaspoonful of Izal in a pint of water and spray some of it on the alighting boards every day, sending it well into the entrance, or try one of the advertised remedies. Keep the hive supplied with disinfectant—naphthaline, or a small shallow vessel, such as a tin lid, containing Izal. A piece of perforated zinc over the lid will prevent the bees getting into the liquid. Lime the ground occasionally round the hives (quicklime is the best) or sprinkle it with Izal or carbolic acid and water. It will be better to burn the affected bees, combs, frames, and quilts, and disinfect the hive.

A. H. C. (Sheerness).—Both are very much a matter of individual opinion, but we prefer: (1) The original ordinary W.B.C. hive; (2) natives.

J. B. (Hampshire).—The only advantage of having frames at right angles to entrance (running from front to back) is that the ventilation is better, but the bees will do quite as well with the frames parallel with the entrance. Frames must not touch the floor board, or the bees will fasten them down with propolis, there must be a space of ⅛in. between the bottom bar of the frame and the floorboard. You must therefore nail a strip of wood ⅛in. thick round the bottom edge of the brood box and level on the inside.

Suspected Disease.

T. C. O. (Coppull).—We do not find disease in the bees sent. They were probably too few in numbers to survive.

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices (not exceeding 7 lines) in this column, 10 lines charged 3s. 6d., up to 15 lines 5s., which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

June 27th to July 1st, at Manchester.—Royal Agricultural Society's Show, Bee and Honey Section, under the direction of the B.B.K.A. Prizes arranged in groups of counties for Associations affiliated to the B.B.K.A. Schedules from The Secretary, 23, Bedford Street, Strand, W.C. **Entries closed.**

Special Prepaid Advertisements

Two Words One Penny, minimum Sixpence.

Will advertisers please read these Rules carefully in order to save trouble, as they will in future be strictly adhered to.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not permissible at above rate, but will be inserted at* 1d. *per word as* "**Business**" *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of* 3s. *per* ¼in., *or* 5s. *per inch.*

PRIVATE ADVERTISEMENTS are only intended for readers having **Surplus Stock** *to dispose of.* **Driven bees, Nuclei,** *and* **Queens that are reared or imported for sale,** *are Trade Advertisements, and can only be accepted under trade terms.*

Advertisements must reach us NOT LATER than FIRST POST on TUESDAY MORNING for insertion in the "Journal" the same week.

Orders for three or more consecutive insertions in "The Bee Journal" entitle advertisers to one insertion in "The Bee-Keepers' Record" free of charge.

PRIVATE ADVERTISEMENTS.

FEW grand 1916 fertiles, immediate delivery, 5s.; NO disease in apiary.—LOWE, expert, Park-road, Chilwell. v 66

WANTED, a few swarms for cash, or exchange White Leghorn hens or day old chicks.—WILLIAM BECK, Airton, Bell Busk, via Leeds. v 69

OVER military age; exceptional knowledge bees, poultry; well up kitchen garden, fruit, pleasure grounds, book-keeping; seeks engagement.—SIMPSON, 29a, Mulkern-road, Highgate, London, N. v 70

MAN, ineligible, or discharged soldier, for poultry, pigs, and bees; good wages.—MORRIS, Garden House, Upper Drive, Hove. v 64

WANTED, a swarm of Italian bees or strong cast, with guarantee as to being free from disease.—A. THOMAS, 21, Dorset-road, South Ealing, London, W. v 71

TAYLOR'S geared extractor, nearly new, 21s.—PRESSEY, 17, Carlton-street, Bridlington. v 65

QUEENS.—Four Dutch cross fertile young queens to dispose of, at once, 4s. 6d. each, introducing cage free; Deposit system or prepaid direct.—G. BOOEN, Raydon, Ipswich. v 63

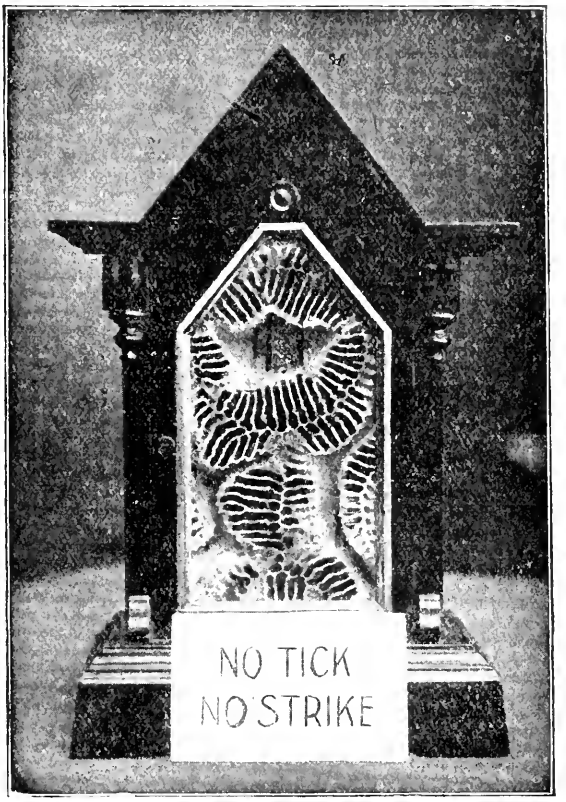
FEW cwts. dark honey for sale; suitable manufacturing; sample 3d.—CHARTER, Tattingstone, Ipswich. v 49

TO CLEAR, five W.B.C. hives, 45s.; seven dozen standard and shallow frames, 35s. complete; all new and clean.—S. COCKS, Napton, Rugby. v 52

WANTED, for educational purposes, piece of comb containing foul brood.—BRITISH BEE JOURNAL Office, 23, Bedford-street, Strand, London, W.C.

PHOTOGRAPH of Comb in clock-case from which 7 lbs. of Honey was extracted. Seventy pounds were abstracted from the hive also. These Bees were badly affected by "Isle of Wight" Disease and treated by M. C. Pay of Croydon, and cured by IZAL washing, spraying and Izalized food. He had the hive given to him to be destroyed, May 24th, 1912, on which day he began his treatment.

"In IZAL they had placed in their hands a worthy and formidable weapon for battling against the bacillus."—*Sir James Crichton-Browne, F.R.S.*



IZAL is supplied by Royal Warrant to H.M. The King.

2 Teaspoonfuls Izal Fluid to 1 gallon of water for washing and spraying New Queen Bee inserted on June 12th 1912.

In September 77 lbs. Honey taken from them. At present, June, 1915 descendants of the original diseased bees are quite healthy.

IZAL

is a Reliable Remedy against Foul Brood.

Sold Everywhere in Bottles, **6d.** & **1/-** each.

Ask for full details of IZAL treatment sent post free by

Newton, Chambers & Co., Ltd., Thorncliffe, nr. Sheffield.

A ROLL OF HONOUR.

Although bee-keeping is considered a minor pursuit, we venture to say that it has provided more fighting men than the usual average of any industry. To place on record the part the members of our craft have played in the present war we propose to make a "Roll of Honour," and shall be pleased if our readers will forward us the NAMES and ADDRESSES, together with the REGIMENT and RANK, of any bee-keeper serving his King and Country at home or abroad; also if killed or wounded.

We print a further list of names to those sent in, and shall be pleased to have other names as soon as possible.

Major F. R. de Bertodano, Holmshill House, Ridge.—General Staff.

Sapr. D. Wilson, Windmill Lane, Belper. —R.E. (Our contributor of "Derbyshire Notes.")

Gunner H. Foster, Ashprington, Totnes, South Devon.—Devon R.G.A.

Pte. H. D. Copps, Ridge.—H.A.C.

BRITISH BEEKEEPERS' ASSOCIATION.

The monthly meeting of the Council was held at 23, Bedford Street, Strand, London, W.C., on Thursday, June 15th, 1916. Mr. W. F. Reid presided, and there were also present Messrs. J. N. Smallwood, G. Bryden, G. S. Faunch, J. Herrod-Hempsall, A. Richards, C. L. M. Eales, J. B. Lamb, G. J. Flashman, A. G. Pugh, G. W. Judge. Association representatives: W. Prior (Crayford), G. Horscroft (Essex), and the secretary, W. Herrod-Hempsall.

A vote of condolence with the widow and family of the late Dr. W. Anderton was passed.

Letters expressing regret at inability to attend were read from Miss M. D. Sillar, Messrs. T. W. Cowan, E. Walker, T. Bevan, and G. R. Alder.

The minutes of Council meeting held on May 18th, 1916, were read and confirmed.

The following new members were elected:—Miss G. Woodward and Mr. E. S. Wheeler.

The report of the finance committee was presented by Mr. Smallwood, who stated that payments into the bank for May amounted to £19 16s. 2d., the bank balance at the end of May being £144 8s. 11d. Payments amounting to £50 9s. 6d. were recommended.

Examiners for preliminary examinations in Somerset and at Swanley were appointed.

Next meeting of Council to be held at the Secretary's Office, Hives and Honey Dept., Royal Show Ground, Manchester, on Thursday, June 29th.

OBITUARY NOTICE.

DR. W. ANDERTON.

It is with profound regret that we announce the death of Dr. W. Anderton, which occurred at his residence, The Mansion House, Ormskirk, on Monday, June 12th, after a brief illness of a little over a week in duration. He caught a chill on Sunday, June 4th, which developed into double pneumonia. He suffered a relapse on the Friday, and gradually weakening passed away as stated.

Dr. Anderton belonged to an old Ormskirk family, and was the doyen of the medical profession in Ormskirk and neighbourhood, and was highly esteemed. He was medical officer of health for the town, and medical officer and public vaccinator for the Ormskirk Union, holding each appointment for over 40 years. The latter he relinquished on superannuation about a year ago, but when his successor joined the Colours he again resumed the duties. He was also visiting physician to the Ormskirk, Lathom and Burscough Joint Hospital Board since its inception, and he had also a long connection with the Ormskirk Dispensary and Cottage Hospital. He was certifying factory surgeon for the town, and for over 35 years he had been medical inspector for the Prudential Assurance Co. He was a staunch churchman, and had served a term as warden and was a sidesman up to the time of his death. He was also one of the trustees of the Ormskirk Church House, a trustee of the Ormskirk Savings Bank, and the chairman of directors of the Mill Lane Mining Co., Rainford. Add to all this a large private practice and it will be conceded that he was justified in describing himself, as he often has done to the writer, as "a very busy man." The deceased was also a Freemason, being a P.M. of one lodge and a P.Z. of the "Unity and Perseverance" Chapter of the Royal Arch Masons. In spite of all these multifarious duties his great hobby was bee-keeping, and he took a great interest in his bees, although of late years he had not much time to devote to them. He was an enthusiastic supporter of the Lancashire B.K.A., and had been for a number of years chairman of committee. During the last two or three years he found time to take the B.B.K.A. exams., passing the lecture test for the final on January 21st, 1915, and was one of the judges appointed for the Royal Show this year,

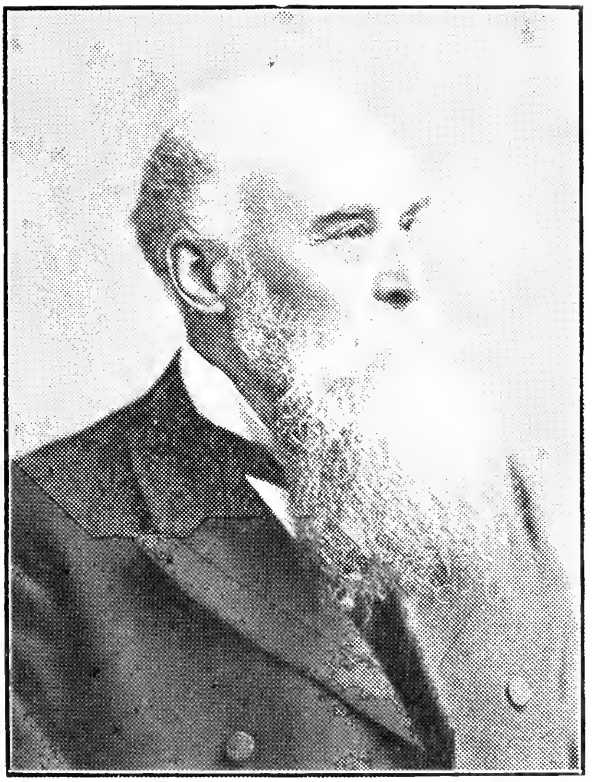
a duty he was anticipating with the greatest pleasure. To the best of my knowledge this is the first time the death of one of the judges of bee produce at "The Royal" has occurred after his appointment and before the show.

When expert to the Lancashire B.K.A. I frequently met Dr. Anderton, and always received a most cordial welcome, and invariably before his own bees were examined he wished to know and hear how beekeeping was faring in the county generally, and more especially among the Association members. The last time I had the pleasure of meeting him was on the Sunday before August Bank Holiday last year, when, after a long chat, he insisted on accompanying me to the station when I returned to Preston. He had officiated as judge at a number of shows, with satisfaction to all concerned.

Always genial, kindly and ready to help those in distress, in a quiet, unobtrusive way, he was remarkably alert and full of life, with the energy of a man 20 years his junior, and was wonderfully active to the last.

Dr. Anderton was born on December 9th, 1847, and served his apprenticeship at Ormskirk, continuing his studies at Liverpool, taking his M.R.C.P. and F.R.C.S. degrees at Liverpool and Edinburgh in 1881.

He was twice married, there being three sons of the first marriage, the eldest of whom, Dr. E. B. Anderton, died in 1902. His second wife, who survives him, is the daughter of the late Mr. R. C. Welsby, J.P., who died in March last, and there are two daughters of this marriage. Mrs. Anderton has thus lost father and husband within the last three months.



THE LATE DR. W. ANDERTON.
Reproduced by the kind permission of the *Ormskirk Advertiser*.

The funeral took place on Wednesday afternoon, June 14th, at Ormskirk Parish Church. There was a large assemblage of mourners, including representatives of the various bodies with which Dr. Anderton was connected, the Lancashire B.K.A. being represented by Messrs. G. Roberts (one of the oldest members), J. N. Bold (late secretary, and his fellow judge at "The Royal"), and F. H. Taylor (hon. treasurer), and among the large number of beautiful wreaths was one from the committee of the Lancashire B.K.A.

—J. H. H.

CRAYFORD AND DISTRICT BEE-KEEPERS' ASSOCIATION.

Our first summer meeting was held on May 27th under most excellent conditions, and a good gathering of members assembled at Mr. V. E. Shaw's Apiary at Eltham.

The meeting was devoted entirely to the most fascinating subject of queen rearing, and Mr. Shaw, who is a past-master on the subject, gave a preliminary lecture, introducing and explaining in minute detail all the various appliances used, together with the preparation of hives, stocks, etc.

We then proceeded to the hives, where he gave us practical demonstrations, including the preparation of a comb containing eggs for producing queen cells, also removing larvæ from cells by the aid of a quill and grafting same into artificial cups—a somewhat delicate operation—which the bees will build out and form into complete queen cells. There was no point of the minutest detail which was not fully and eminently dealt with, and I am confident that from this lecture members learned what to do and how to do it more readily than by learning any text book by heart. Questions were courted and answered freely, and we all felt grateful to Mr. Shaw for his kindness and patience.

This most interesting course of instruction was followed by a very welcome and enjoyable tea on the lawn, where the Ladies' Committee had prepared in a most exquisite style the refreshments; a social item which puts the stamp of success on our meetings. It is during this *tête-à-tête* that notes are compared, novices' difficulties are discussed, opinions, advice, and ideas fully exchanged which prove so valuable to the average bee-keeper and make these meetings so much looked forward to.

After tea the candidates for the forthcoming B.B.K.A. preliminary examination were ranged in class form and questioned by Mr. Judge, Mr. Bryden and Mr. Shaw, to test their knowledge and find out weak points. All members were invited to listen to the proceedings, and no doubt much useful instruction fell on the ears of new members.

The usual courtesies were given. The President, Mr. Dewey, proposed our hearty thanks to Mr. Shaw for his valuable lecture, and also included Mrs. Shaw for receiving and making us so welcome. A vote of thanks was also accorded to the Ladies' Committee for their gifts and services, and the very successful meeting came to a close.—A. C. P.

TELLING THE BEES.

By J. G. Whittier.

Here is the place; right over the hill
  Runs the path I took;
You can see the gap in the old wall still,
  And the stepping-stones in the shallow brook.

There is the house, with the gate red-barred,
  And the poplars tall;
And the barn's brown length, and the cattle-yard,
  And the white horns tossing above the wall.

There are the beehives ranged in the sun;
  And down by the brink
Of the brook are her poor flowers, weed-o'errun,
  Pansy and daffodil, rose and pink.

A year has gone, as the the tortoise goes,
  Heavy and slow;
And the same rose blows, and the same sun glows,
  And the same brook sings of a year ago.

There's the same sweet clover-smell in the breeze;
  And the June sun warm
Tangles his wings of fire in the trees,
  Setting, as then, over Fernside farm.

I mind me how with a lover's care
  From my Sunday coat
I brushed off the burrs, and smoothed my hair,
  And cooled at the brookside my brow and throat.

Since we parted, a month had passed,—
  To love, a year;
Down through the beeches I looked at last
  On the little red gate and the well-sweep near.

I can see it all now,—the slantwise rain
  Of light through the leaves,
The sundown's blaze on her window-pane,
  The bloom of her roses under the eaves.

Just the same as a month before,—
  The house and the trees,
The barn's brown gable, the vine by the door,—
  Nothing changed but the hives of bees.

Before them, under the garden wall,
  Forward and back,
Went drearily singing the chore-girl small,
  Draping each hive with a shred of black.

Trembling, I listened: the summer sun
  Had the chill of snow;
For I knew she was telling the bees of one
  Gone on the journey we all must go!

Then I said to myself, "My Mary weeps
For the dead to-day:
Haply her blind old grandsire sleeps
The fret and the pain of his age away."

But her dog whined low; on the doorway sill,
With his cane to his chin,
The old man sat; and the chore-girl still
Sung to the bees stealing out and in.

And the song she was singing ever since
In my ear sounds on:—
"Stay at home, pretty bees, fly not hence!
Mistress Mary is dead and gone!"

ECHOES FROM THE HIVES.

A record from me may interest and encourage some of your readers.

Last June, 1915, I possessed in Devizes out of five hives a very strong hive on 14 combs which I supered on May 21.

May 24, honey out, 24 lbs.

June 12, honey out, 31 lbs.

June 22, found the 12 shallow combs sealed up with 45 lbs., and besides this they gave me a small box, 10 lbs.

Total, 110 lbs.

The record was the 44 lbs. gathered and sealed in the fortnight.

Owing to removal to a new home I did not send this before.

I have just started with a colony of Italians purchased from Mr. C. Overton, and have now three hives, as the original gave me two swarms in May, but there is little honey about.

I believe I am the sole possessor of bees in Alfold owing to the ravages of "Isle of Wight" disease.

There have been an enormous number of queen wasps, and I offered our children in the schools ½d. for every one brought in. So far, with what I have myself killed, 1,400 queens have been secured. Has anyone else, I wonder, noticed an unusual number of these pests?

Can any of your readers tell me how to distinguish a queen from a drone? Both appear to have stings.—PHILIP W. G. FILLEUL (Rev.).

Alfold, Billingshurst, Sussex.

[The drones are not reared until August or September, and with the workers perish during the winter. The drone has one more segment in the abdomen. To the ordinary observer, however, the most noticeable difference is in the length of the antennæ, those of the drone being much longer than those of either queen or worker, and the drone wasp, like the drone bee, has no sting.—EDS.]

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

"ISLE OF WIGHT" DISEASE OR STARVATION?

[9286] Perhaps you may see your way to reprint the enclosed cutting from the *Dundee Advertiser* in the columns of your interesting and instructive paper, the BRITISH BEE JOURNAL, for the information and possible observation of brother bee-keepers. I do not know the correspondent, though I live in the neighbourhood, but is it not more like a case of starvation and death from cold, or maybe both starvation and cold, than the dread "Isle of Wight" disease?

I am a bee-keeper of some years' standing in this district, and had the misfortune to lose one of my stocks—natives—last winter. This was due, I think, first to the winter quilts having been blown out of position at one corner—no doubt causing a cold draught through the brood chamber during the cold days of winter, and, secondly, to not giving the bees in that particular hive a supply of bee candy early enough, and they had quickly and unexpectedly run short of stores. I have had no disease in my apiary so far, and hope I shall keep clear. All good wishes for yourselves and the BRITISH BEE JOURNAL.—CLARENDON.

A BEE TRAGEDY.

THE COMING OF THE PLAGUE.

Imaginative men of science have sometimes pictured the possibility of a catastrophe to the human race which would swiftly and effectively sweep it off the face of the globe, leaving the way clear for some other and perhaps more hopeful species to take up the primacy of organic nature. Not a great deal is needed—merely a microbe. Suppose that some microbe, of wide distribution and great power of enduring climatic variations—such a one as the despised pest which is responsible for the common cold—were to undergo the probably small variation necessary to convert it from a nuisance

to a scourge capable of blotting out whole communities, as the measles microbe blotted out whole communities of South Sea islanders, that would be enough. There is some reason to think that clearances of this kind have taken place before now, and that the particular form of struggle for existence which obliterated many of the great animal races whose bones the geologists find in the rocks was a struggle ineffectively waged with the smallest of enemies. And just such a thing may be happening now in the very curious and puzzling "Isle of Wight" bee disease.

For some years past this baffling malady has been desolating the apiaries of Britain, and breaking the hearts of the apiarists, most enthusiastic and devoted of men. In the press of the cult its progress was reported with much the same poignancy of feeling less specialised journals would have brought to an unparalleled advance of Asiatic cholera or bubonic plague. And at last, as I gather from a melancholy communication, it has reached Dundee. I let my correspondent speak for himself:—

"It didn't look like even the material for a tragedy in October last. Both hives were full of bees, each headed by a young and prolific queen, one of which had been brought from far and had cost much coin of the realm. They had gathered more honey than ever I had got before, and were themselves amply provided with food to carry them on to the spring. So when the cold weather was near they were packed up with warm stuff on top of the frames, the door opened wide for ventilation, and they were left to themselves in what was supposed to be 'the sure and certain hope' of renewed activity and diligence when April should come round. In the ordinary state of things bees in winter form what is called a cluster between two of the combs. A lot of them go head first into the empty cells, with their hind legs sticking out, and on to these and to each other the rest hang in a lump. The congregation is in continual movement of exceeding slowness. As soon as the bee of the bottom begins to feel cold she works her way up to the top, where there is more heat, and finds her way in to the interior of the group. At the top of the combs are the stores, which are gradually consumed, and this goes on all winter, with the exception that when there is a really fine day the bees come out for a short flying excursion, and when they return they cluster in a different place, and begin the process of slow revolution once more. About January, as a rule, the queen who is with the bees begins to lay a few eggs, and this goes on until by March or April there should be a fair force of young bees ready to take up the work when the older ones retire permanently from business. Such is the normal programme, and in Dundee, which the dreaded 'Isle of Wight' disease had spared, a repetition of it was confidently looked for. The plague which had slowly travelled north from the very south of England during the last half-dozen years, had gone much further north than the Tay, ravaged Perthshire, and was gradually approaching. Blairgowrie was almost cleaned out. Newtyle had suffered, then word came that Auchterhouse was gone, and at last came the ghastly news that it had reached the Lochee district. Still the hives in question looked all right until the middle of December, when a glance from a distance showed something wrong with one hive. Anxiously a closer view was taken, and lo! the platform in front was absolutely covered with probably thousands of dying bees, who had come out 'en masse' for the purpose, and on the ground, stretching south-east from the platform corner, was a long trail of many thousands. Curiously enough, another recent observer reported in one of the bee journals a precisely similar direction of the dead. A day or two after, on looking into the hive, every remaining bee was found dead on the floor except one pathetic group of about a dozen clustered together at the very top of a comb, all dead with the dead queen in their midst!

"The other hive cast out no dead, and there was not the least sign of trouble for months after the neighbouring disaster, when the disturbing idea formed itself that there had been no sign of 'anything.' The top was lifted off, and behold, every single bee was lying dead on the floor! Why did the one lot practically all come out, and the other lot all stop at home to die?"

The disease which is capable of thus sweeping away the population of the hive has still to be elucidated. Away back about the seventies the bees of Britain were assailed with a malady known as "May Paralysis," but there is little reason to think that May paralysis and "Isle of Wight" disease are one and the same thing. It has come as a novelty, and much in its history suggests either the arrival of a new microbe, or a fatal variation of an old one. That microbes can undergo variation is, of course, well known, and if their probability of variation is proportioned to their speed of reproduction it is great indeed. If we assume that effective mutations occur once in a thousand generations, it would mean once in a thousand years for rook or raven, and for the microbe once a week. The particular organism credited with responsibility for the bee disease goes by the name of *Nosema Apis*, but so little is yet known about the disease for certain that even this agency is in dispute. *Nosema Apis* is always found in bees which die of the disease, but it is also found not infrequently in bees which appear to be in high health. One point about the tragedy described above

I pass on to the moralist. Whatever may be the infection, there is no doubt that it was brought into the hives by robber bees. These are always readily recognised by their black colour, produced by the rubbing away of their hair at many fights, and in the latter part of last season they were very numerous. The bee-keeper knows them, in the language of the police, as "habit and repute" thieves, and when he perceives that they are numerous he assists his legitimate stock in what ways he can. He narrows down the entrance door of the hive, and with a contracted portal the sentinel in charge is able to bar the way. But if the burglar visitor is a carrier of infection it all avails nothing. The sentinel tries to push the intruder away, and in doing so becomes infected herself. Soon she rubs against the other coming and going inmates of the hive, and the mischief is done. Black death is introduced, and general catastrophe is only a matter of time. X. Y. Z.

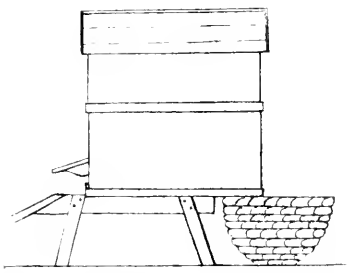
[No mention is made as to the state of the stores, but from the other symptoms described we are afraid the writer is right in diagnosing "Isle of Wight" disease.—EDS.]

EXPERIENCES.

[9287] For the benefit of bee-keepers I send you a sketch and the method I adopted in driving a skep last autumn.

I found it answered very well, it being quicker than the old method, not exposing the bees nor exciting other stocks to start robbing.

After arranging the combs in the hive I drew the body-box back about 6 ins., then placed the skep under (as



DRIVING FROM SKEP TO FRAME HIVE.

per sketch), packing it up until it was tight under the hive and touching the bottom edge of the brood combs.

With the usual drumming on the skep the bees went up on to the combs. I then drove them well up with a little smoke; this enabled me to slide the body-box forward to its right position and the job was then done, lasting in all from 10 to 15 minutes.—W. IOX, Healing, Grimsby.

KILLING QUEEN WASPS.

[9288] The notice of what the Peterboro' and District Bee-keepers' Association has done in the way of killing queen wasps is at once interesting and instructive. Early in May we found a great many wasps here, and I enlisted the schoolchildren in killing them. They handed the master several hundreds. The idea rather struck one man, a gardener, and after killing for several days he thought he would keep count. He laid himself out to kill all he could in one day, with the result that he bagged 166, and on another day 62. His strawberries have posts and rails round and over them, for supporting nets. These posts and rails formed a good hunting ground, for the queens, in search of material for their nests, settled on these in large numbers and so were killed fairly easily. There is no need to say he was quite pleased with his kills, all the more so as there must be many fewer wasps to contend with when his fruit will be ripening. Bee-keepers in the immediate vicinity should be equally pleased.

There are still lots of queens about, but nothing like in such numbers as we had when the killing started.—P. M. T.

PRESS CUTTINGS.

QUEEN WASPS.

Sir,—Mr. Denning's letter in your issue of May 14 may well form a halfway house from the "newspaper entomology" of some of your correspondents to an intelligent observation of the habits of these interesting insects. But when he speaks of flies he lets in a flood of ambiguity. Flies are by no means all noxious. Some are devourers of other flies. Some, the various kinds of sun flies, are among the most effective checks on the multiplication of the aphis or green fly. Others destroy mischievous caterpillars.

If anyone wishes to discover what flies are destroyed by wasps, let him take his stand with a net before a nest early in the summer. The wasps will constantly be coming and going. The outward-bound wasps will be carrying out lumps of excavated soil. Those that are returning will carry flies to feed the hungry grubs. They are easily caught and will drop their prey in the net. Legs and wings will be bitten off, but it will be possible to see at least to what family the fly belongs. From my own experience I think it will be found that if the first is a "cleg," or some such nuisance, the next will be a sun fly or something innocent, if not useful. Systematic observations on this, as on most

points in the history of insects, are the only means of ascertaining the truth.

Similarly, the usefulness of insectivorous birds, which is always taken for granted, may be a mere superstition. It all depends on knowing what insects they devour. The balance of nature is not necessarily arranged to suit the convenience of human beings. The one thing that may, perhaps, safely be said is that as soon as we interfere to upset the balance, we have to look out for squalls.

FRANCIS JENKINSON.

Sir,— Some people, I believe, sympathise with the slain wasps who nearly stung Ireland to death. Mr. Denning likes the common garden wasp for no better reason. The few flies they kill cannot compensate for their depredations on fruit and their tormenting inroads at meals and picnics and cricket luncheons. Moreover, they seldom attack the house fly, or the still more dangerous blue-bottle. They are very foul feeders, delighting in garbage, offal, and putridity of all sorts. It must be very doubtful whether they do not carry about diseases. I would as soon spare adders because they eat frogs.

HONEY BEE.

From the *Sunday Times and Sunday Special.*

Notices to Correspondents

Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. All questions must be accompanied by the sender's name and address, not necessarily for publication, but as a guarantee of good faith. There is no fee for answering questions.

S. ANDREW (Tiverton). *Using Izal and Epsom Salts.*—The bees must not be *dipped* in Izal solution. You may spray them lightly with it. It may do good to put a little Epsom salts in the drinking water.

G. W. LANG (Hereford). *Uniting Nucleus and Young Queen to Old Stock.*—The old queen should be taken away twelve hours before uniting. Separate the combs in the old stock so that the three in the nucleus may be put in alternately with them. If the old stock contains the full ten combs take out three and brush or shake the bees off them back into the hive, and thoroughly dust the bees with flour. Then place the combs from the nucleus in the spaces left for them, first flouring the bees on each comb. It is safer to cage the young queen on a comb for twelve hours, using a "pipe cover" cage. How to do this will probably be illustrated in the JOURNAL next week.

P. M. THOMPSON (Mealsgate).—The appearance is caused by the honey and pollen fermenting.

HONEY IMPORTS.

The registered value of honey imported into the United Kingdom during the month of May, 1916, was £4,977.—From a return furnished to the BRITISH BEE JOURNAL by the Statistical Office, H.M. Customs.

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices (not exceeding 7 lines) in this column, 10 lines charged 3s. 6d., up to 15 lines 5s., which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

June 27th to July 1st, at Manchester.—Royal Agricultural Society's Show, Bee and Honey Section, under the direction of the B.B.K.A. Prizes arranged in groups of counties for Associations affiliated to the B.B.K.A. Schedules from The Secretary, 23, Bedford Street, Strand, W.C. **Entries closed.**

Special Prepaid Advertisements

Two Words One Penny, minimum Sixpence.

Will advertisers please read these Rules carefully in order to save trouble, as they will in future be strictly adhered to.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not permissible at above rate, but will be inserted at* 1d. *per word as* "**Business**" *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of* 3s. *per* ½*in., or* 5s. *per inch.*

PRIVATE ADVERTISEMENTS are only intended for readers having **Surplus Stock** *to dispose of.* **Driven bees, Nuclei,** *and* **Queens that are reared or imported for sale,** *are Trade Advertisements, and can only be accepted under trade terms.*

Advertisements must reach us NOT LATER than FIRST POST on TUESDAY MORNING for insertion in the "Journal" the same week.

Orders for three or more consecutive insertions in "The Bee Journal" entitle advertisers to one insertion in "The Bee-Keepers' Record" free of charge.

PRIVATE ADVERTISEMENTS.

SEVERAL VIRGIN QUEENS, healthy Anglo-Italian, swarm raised, post paid, 2s. 6d.—HORSCROFT, 207, Coventry-road, Ilford. v. 76

WANTED.—Several swarms or lots of Driven Bees; must be cheap.—80, Wharfedale Gardens, Thornton Heath. v 75

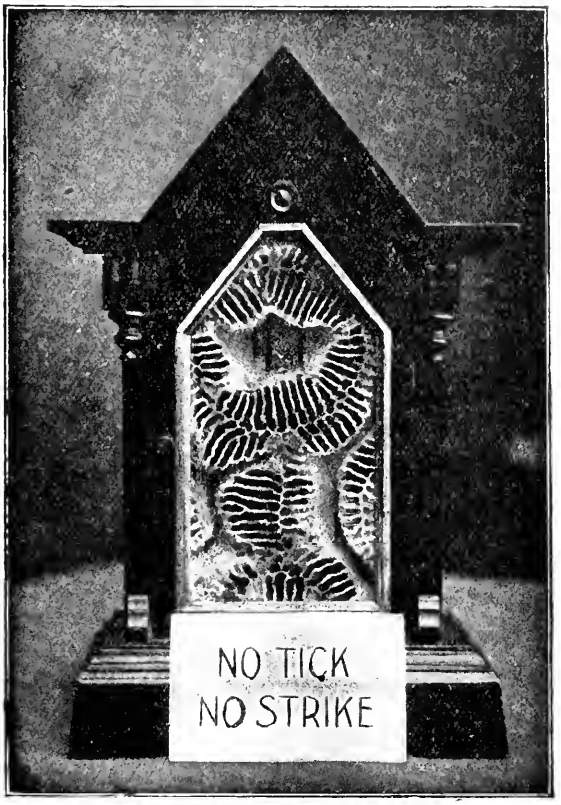
TEN Strong Stocks of Bees for sale; section crates on (disease unknown) overstocked.—T. WINSBY, Leyburn, Yorkshire. v 77

SALE, strong stock healthy Bees, 25s., with hive 7s. 6d. extra; also strong, healthy swarm, 15s.—CHEASLEY, Lashbrook, Henley-on-Thames. v 79

SIX new X.L. hives, 15s. each; 10 W.B.C. pattern, second-hand, little used, 12s. 6d. each.—Particulars. CURTIS, Brant House, Holbeach. v 78

PHOTOGRAPH of Comb in clock-case from which 7 lbs. of Honey was extracted. Seventy pounds were abstracted from the hive also. These Bees were badly affected by "Isle of Wight" Disease and treated by M. C. Pay of Croydon, and cured by IZAL washing, spraying and Izalized food. He had the hive given to him to be destroyed, May 24th, 1912, on which day he began his treatment.

"In IZAL they had placed in their hands a worthy and formidable weapon for battling against the bacillus."—*Sir James Crichton-Browne, F.R.S.*



IZAL is supplied by Royal Warrant to H.M. The King.

2 Teaspoonfuls Izal Fluid to 1 gallon of water for washing and spraying New Queen Bee inserted on June 12th, 1912.

In September 77 lbs. Honey taken from them. At present, June, 1915 descendants of the original diseased bees are quite healthy.

IZAL

is a Reliable Remedy against Foul Brood.

Sold Everywhere in Bottles, **6d.** & **1/-** each.

Ask for full details of IZAL treatment sent post free by

Newton, Chambers & Co., Ltd., Thorncliffe, nr. Sheffield.

A ROLL OF HONOUR.

Although bee-keeping is considered a minor pursuit, we venture to say that it has provided more fighting men than the usual average of any industry. To place on record the part the members of our craft have played in the present war we propose to make a "Roll of Honour," and shall be pleased if our readers will forward us the NAMES and ADDRESSES, together with the REGIMENT and RANK, of any bee-keeper serving his King and Country at home or abroad; also if killed or wounded.

We print a further list of names to those sent in, and shall be pleased to have other names as soon as possible.

Pte. W. H. Newson, Broome, Bungay, Norfolk.—3/6 Essex Regiment.

Kenneth A. J. Moore, Radstock, Somerset.—First-class Boy Telegraphist, H.M.S. *Turbulent*; killed in naval battle, May 31st.

The news of the loss of H.M. Destroyer *Turbulent* with all on board came as a painful shock to Mr. H. J. Moore, of Radstock, whose only son, Kenneth A. J. Moore, was a first-class boy telegraphist on board that vessel. The lad, who was only 16 years of age, gave great promise of a successful career. The *Turbulent* was one of the destroyers which was sunk on May 31st in the greatest naval battle in history.

Mr. Moore is well known in Somerset as a bee expert, and the lad will be remembered by many bee-keepers. He frequently cycled with his father when on tour.—W. J. R.

REVIEWS.

Productive Beekeeping, by Frank C. Pellett. Price 6s. net. J. B. Lippincott Company, London.

[*Lippincott's Farm Manuals*. Ed. by K. C. Davis, Ph.D. (Cornell).]

This is a splendidly got-up book, the illustrations being of a high order, the text is clear and large, the whole work right through shows the touch of the practical man who knows the most successful methods of beekeeping suitable to his country. The author has, very rightly we consider, devoted the whole of the book to the practical side, leaving science and theory to be dealt with by others in a separate work, so that the purchaser gets good value for his money.

The author has studiously avoided the practice followed by some Americans, in recent works, of attempting to describe and criticise European methods, where climatic and other conditions are vastly different, and of which their knowledge is superficial, being obtained by reading and not by actual experience. These descriptions, criticisms, and especially the illustrations—or shall we say caricatures—are a source of intense amusement to beekeepers in this country.

Mr. Pellett rightly says: "I do not say much about European conditions, since I am not familiar with them, neither do I go into the history of beekeeping, or the scientific questions. It is designed to be a manual of practical beekeeping as practised in this country."

We congratulate the author on his scrupulous adherence to the above, also his clear and explicit instructions, and the faultless illustration of this splendid work. Also the American beekeepers, and would-be beekeepers, in having placed within their reach information couched in such plain and simple language.

A Veteran Naturalist. Life and Work of W. B. Tegetmeier, by E. W. Richardson. Witherby & Co., 326, High Holborn, London. 10s. net.

This very interesting work, written by his son-in-law, gives a good idea of the energy of the grand old man of natural science, lecturer, naturalist, and journalist.

No one could listen to his lectures, or converse with him, as the junior editor has done many times at Swanley College, without being struck with his profound knowledge, keen observation, and interest in everything connected with Nature.

Not perhaps known much to the present generation, he was, in his time, the colleague and friend of many eminent men, amongst whom was Charles Darwin and Professor Cheshire.

He lived to the ripe age of 96 and was virile almost to the last, and he had a great aversion to be thought physically weak.

For many years he was connected with the *Field* and wrote, revised, or translated no less than 32 books and pamphlets, on a variety of subjects.

Our readers will be more interested in his work in connection with bees. He read a paper before the British Association, at Leeds, in October, 1858, on "The Formation of the Cells of Bees," and in Chapter VI. of the book is given very interesting details of his experiments to prove that the cell is of cylindrical formation.

We commend the book as a valuable addition to the library of all those interested in Nature study.

QUEEN-REARING AND INTRODUCTION.

(*Continued from page* 187.)

There are a number of methods by which queens can be introduced. The first one I mention is the direct method, originated by Mr. S. Simmins, of Heathfield, whose idea has been unjustly claimed by some American beekeepers as their own. It consists in first making the stock to be requeened queenless about midday, then in the evening the queen to be introduced is placed in a match-box and put in the waistcoat pocket to keep her warm, and allowed to remain alone without food for half an hour, after which time the quilt is turned up at one corner and the queen is allowed to run down amongst the bees. My advice to the beginner with regard to this is *don't*. That it succeeds in the hands of the experienced beekeeper in the majority of cases there is no doubt, the exception being in dealing with a valuable queen. In such a case it is ten to one that she will be found dead outside the hive the next morning. It pays to take a little trouble in introducing queens, and the beginner will be well advised to use one of the reliable cages in use, with which, if the instructions are carried out, the failures do not reach one per cent.

Another method strongly advocated in America is, after making the colony queenless, to drive dense volumes of smoke in at the entrance and allow the queen to run in while the bees are in an excited condition, then smoke well again after she has run in. Again, some introduce a queen by first rolling her in honey taken from the combs of the stock to which she is to be introduced, then dropping her amongst the bees, who immediately set to work to clean her; as she has the scent of the hive upon her she is accepted. I cannot recommend this plan, as the honey is very likely to cause suffocation by clogging the spiracles (breathing holes) in the segments of the abdomen and thorax. While yet another method practised is to make an artificial swarm, in a skep or box, of the stock to be requeened, then hive it back on to the combs; first pick up the old queen and then drop the new one amongst the bees as they run into the hive. In the excitement of the operation she is not molested, and so takes the place of the original mother. This method entails a lot of labour and time, and there is a great deal of risk as to whether the queen will be accepted or not.

As already stated bees recognise each other by smell, therefore the queen must be placed in the hive for a given period, in such a position that she will attain the scent of the hive without the worker bees being able to get at and kill, or damage, her.

This end is attained by using a queen cage, varieties of which are shown at Fig. 84. No. 1 is a wooden cage with celluloid on either side, perforated with holes, and a small hole at the bottom for liberating the queen, a piece of thin wood at the top, with a nail driven through the centre so that it can be turned at right angles to suspend the cage between the combs. No. 2 is a pipe cover cage, No. 3 is an American wooden cage with one side covered with wire cloth with a food-hole at one end for liberating the queen, seen stopped with a cork. No. 4 is an American spiral cage. No. 5 is a make-shift wooden cage with a single hole covered with wire cloth, on either side a piece of tin is nailed at right angles on the top for suspending it between the combs. No. 6 is a perforated zinc cage, U shape, with a flat piece of tin pivoted in the centre of the open part, which can

be kept closed for confining the queen, or pushed back at the top to open, as seen in the illustration, to liberate her without taking out the cage. This cage should not be used, as there is great danger of damaging the queen with the tin door. No. 7 is made of perforated zinc bent oval shape, a couple of wires run down either side are attached to the bottom of a small tin receptacle, which is filled with

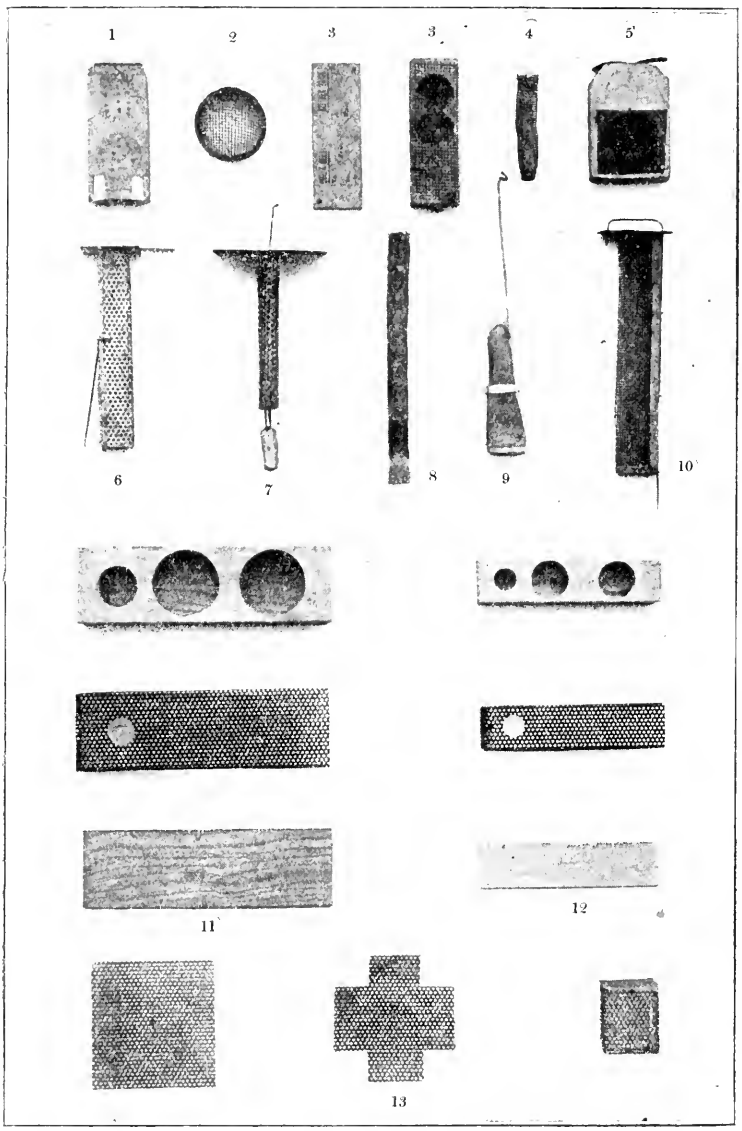


FIG. 84.

food and slides inside; to liberate the queen it is pushed out as shown. This cage should be avoided, as not only is the queen liable to be drowned if the food is too soft, but there is the risk of her being damaged when pushing down the wires. No. 8 is another makeshift made by bending wire cloth round a piece of circular

wood, half an inch in diameter, and soldering the loose edges together; one end is stopped with a cork. When introducing a queen the other is filled with a piece of foundation, which the bees eat away. No. 9 is Mr. Sladen's cage, already described. No. 10 is a Raynor cage, made by bending a piece of wire cloth U shape, the edges are strengthened by tin binders. There are a couple of stays in the open part, in these, and also the top and bottom, holes are punched to allow a wire to be passed right down the open portion to close it, this is bent over at the top, the short end going into another hole on the opposite side, to enclose the small square hole in the metal top through which the queen and workers are run in. The cage is hung between a couple of combs until the necessary period of confinement has expired, when the wire is drawn out so that the queen is liberated without disturbing the combs or bees in the least. No. 11 is a large travelling introducing cage, used for sending bees abroad, while No. 12 is a small one of the same kind used at home. No. 13 shows how to construct an introducing cage from a piece of perforated zinc.

(To be continued.)

CORRESPONDENCE.

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NOTES FROM AN OBSERVATION HIVE.

[9289] On Saturday, May 27th, having no swarm to put into the observation hive, and being anxious to set it up for the season, I took from one big stock of Carniolans a comb, with plenty of brood and bees. From another Carniolan stock I took two more combs—the observation hive is a three-comb one—one with plenty of honey and a little brood on one side, the other with bees, brood, eggs and two sealed queen cells. The little colony was safely established in its new home, the hive and passage darkened, and the bees made prisoners by means of perforated zinc, to prevent them from going back to their parent hives. On the following Wednesday morning I removed the zinc and took the covering from the passage. For some hours the bees did not avail themselves of their liberty, then they poured out and hovered joyfully about the entrance. I took the opportunity to carefully examine the hive. To my astonishment, there were now *seven* queen cells! One was sealed over, the others well advanced. Two days later two more cells were sealed over, and the remaining two all but finished. In addition to this, brace combs from the two original queen cells to the glass have been carefully constructed. So during their forced "confinement to barracks" the little prisoners had not been idle! The marvel is where they got all the needful wax for these extensive building operations, as the store of honey seems very little depleted. All the five new queen cells were built on the same comb as the original two.

On June 2nd the largest queen cell hatched out, and the bees began at once to destroy the others. A week of somewhat uncertain weather succeeded, but on June 10th the queen was mated and commenced her egg-laying the following day. The bees at once began to carry in pollen, and the hive is the scene of the greatest activity until quite late in the evening.

Here in Guernsey we have had a good early honey season, and, so far, the dread Isle of Wight disease is unknown in the island.—FARREN LE BRETON, 36, Hauteville, Guernsey.

ITALIAN BEES AND "ISLE OF WIGHT" DISEASE.

[9290] I have noticed, during the last few months, that several correspondents of the B.B.J. have given Italians a good word as being, if not immune, very resistant to the "Isle of Wight" disease and, as far as one can judge, the evidence does appear to bear out the contention of these "Italian" enthusiasts. As I was

desirous of learning all I could about the disease, I procured the supplements to the *Journal of the Board of Agriculture*, Nos. 8 and 10. From the life history of *Nosema apis*, as given in No. 8, I gather that the life cycle consists mainly of three stages, planont, meront, and spore, and that when in the two first stages the parasite is capable of increasing to such an extent as to cause the death of the bee, but retribution quickly follows as these young forms of *Nosema apis* are unable to long survive the death of their host, but perish shortly after that event. Now if the bee has a constitution strong enough to survive until the *Nosema* reach the spore stage, the spores may be shed from the walls of the chyle stomach, or intestine, passing out with the excrement and they will live for a considerable time, it may be for one or two years, or perhaps longer. If the excrement containing spores is voided on the ground, or vegetation, near the hives, other bees taking up water from these sources after a shower will probably take the spores into their own system, and become infected, or carry them into the hive and thus infect other bees as well. Unless the beekeeper is careful to provide a supply of water that can be, and is, kept clean and uncontaminated, more or less excrement containing spores will be dropped into it, or dead bees containing perhaps millions of spores may get into the water and there decompose, but, unlike the planonts and meronts, the spores will still retain their vitality, and only need transporting into a favourable medium to "hatch," if I may use the term, into the planont form and continue the work of devastation.

I have thought this matter over carefully, and have come to the conclusion that these "resistant" or "immune" bees are really, to a great extent, responsible for the spread of the disease. They are, in fact, "parasite carriers," and, as is stated more than once in Supplement No. 8, parasite carriers are important agents in spreading disease.

Now there is at present no race of bees that may not become infected with *Nosema apis*, and it is quite clear, to my mind, that Italian bees that will "resist" the disease have done a great deal towards spreading it among other bees. On page 12, of Supplement No. 10, is stated: "During 1912-13 no bees containing very large numbers of spores were found by us, and in only one or two cases were there young stages in the hæmocœlic fluid. The most heavily infected case was a large Italian queen, whose hæmocœlic fluid contained a fair number of meronts. The gut of this queen also showed meronts. No spores were found by us in any part of this queen, though they may have been present in the gut and have been discharged prior to our examination. . . . . During the 1912-13 season we examined 14 queens, six being killed for purposes of examination, and the remainder being dead when received. Three more queens were examined, but as they came from a hive in which several queens were present, and two of the queens had not been fertilised, they are not included in the above list. All the six queens killed by us had an infection of *Nosema apis* in their alimentary tracts. Five cases were slight, and one was a moderately heavy infection. A very few spores were found in the chyle stomach of one queen, but in the other five the parasites present were young stages only. The queen in which mature spores occurred was a large Italian, and was interesting in that young stages of *Nosema apis*, in "nests" of six to sixty, occurred in her chyle stomach. Meronts were also found in her hæmocœlic fluid."

In the chapter on parasite carriers in No. 10 Supplement, page 15, "One queen, a large Italian, again a survivor of a hive, certainly was a parasitic carrier. She contained a few spores in her gut, but her chyle stomach and hæmocœlic fluid both contained numerous multiplicative stages of the parasite. As queens survive generations of workers the infection of one queen is more serious than that of one worker as far as maintaining the activities of the parasite are concerned, though the numbers of the workers render them the more important in spreading the disease rapidly."

In Supplement No. 8, page 54, we have the following passage:—"Assuming that intestinal infection occurs not infrequently in the queen, shortly after the stock becomes infected, it is of importance to consider in what ways she may be instrumental in spreading the disease. When spores are developed within the intestinal cells they pass into the lumen of the gut and are voided with the excrement. The queen deposits fæcal matter within the hive, and this is removed by the workers. Consequently, even in the absence of dysenteric symptoms, the queen, after she has become infected, may be an important factor in spreading the disease in this way. Further, the eggs may become soiled and infected as they are being laid. Infection of the larvæ may thus occur."

Taking all these things into consideration I fail to see how the introduction of Italian queens is going to help to stamp out the disease. Their progeny may survive for a time, possibly a year or two, while still suffering more or less from the disease, and in the meantime be infecting all other bees in the district, and

these will probably not be able to resist the particular strain of *Nosema* being disseminated.

Another excuse for importing foreign bees is that our native bee has deteriorated from long inbreeding. This I most emphatically deny. Compared with a continent the British Isles are perhaps small, but not so small that our bees have been compelled to inbreed to any extent, but granting this is so, is inbreeding to a certain extent such a great evil? I take it, if the theory that it is bad holds good for one thing, it does for another. For the sake of illustration we will suppose that a poultry fancier desires to produce a new strain of fowl. By crossing various breeds he gets the type he desires, but this type must be "fixed," and how is it to be "fixed," in the first instance, except by selection and *inbreeding*? And the same may be said in the case of new colours or varieties of flowers. Then, again, are many of the districts in which these particular varieties of foreign bees found much larger than the British Isles—Liguria, Carniola, etc.? And how much inbreeding has there been in those districts to keep the different varieties so pure and distinct? Now, suppose interbreeding one variety with another is so conducive to vigour and a good constitution, one would expect hybrids to be the strongest and most vigorous bees, rather than the pure varieties, but how many of our leading beekeepers sing the praises of the hybrids? So far as I can see they succumb to the disease almost, if not quite, as readily as the native bees, and do not surpass them as honey gatherers, and I think it is generally conceded that natives give the best comb honey. I grant that Italian and Carniolan queens are very prolific and raise huge colonies of bees, but they appear to devote most of their energy and the nectar they gather to rearing brood, and the amount of surplus they give is not so large when compared with the number of bees in the colony, and they are also more likely to swarm than the natives. Those of our beekeepers who go in for queen rearing devote most of their attention to the foreign varieties. It is a pity, as I think the junior editor has more than once pointed out, the same attention that is bestowed on the selection and breeding of the foreign varieties is not given to our own native bee. For my part I would reverse what one of your correspondents said, and say, "Away with the foreign bee," as, in my opinion, the introduction to this country of the particular strain of *Nosema apis* that is proving so destructive to our bees is due to their unrestricted importation.—NATIVE.

"CAUSE OF 'ISLE OF WIGHT' DISEASE" (*Page* 127).

[9291] In former letters I thought the cause might be traced to unripe pollen, incidental with the funny and abnormally mild winters we have had, and it is easier to breed a disease of this kind than to cure it. But how was it confined to the "Isle of Wight" for three years? But while we are on this track, can anyone tell us the constituents of the "Ivy pollens," or whether any of them would be injurious? Late autumns, the last few years, have given bees in most districts an extra fillip from this source.—A. H. HAMSHAR.

ECHOES FROM THE HIVES.

SHROPSHIRE.

I could not help admiring the cheery, optimistic tone of friend Shuker's letter of May 11th, in spite of the fact that his own apiary had been attacked by Isle of Wight disease. I do not like to damp anyone's ardent spirit, but I am much afraid that before the winter comes his jubilant notes of joy will be turned into lamentation, mourning and woe: for my own experience is that by the time that the first colony in an apiary shows symptoms of the disease, many, if not most, of the other colonies are already infected, although they may not manifest any symptoms for some time afterwards, and that the apiary is doomed to extinction from the first.

Living as I do myself in the Severn Valley, and having a large circle of friends and acquaintances amongst the bee-keeping fraternity in the Bridgnorth district, I have opportunities of knowing how hardly they have been hit by the disease, and I can assure them that they are not peculiar in this respect, as Isle of Wight disease has been rampant in all parts of the county of Salop, and only just here and there in some isolated out-of-the-way spots are any bees left alive and healthy. From my own personal knowledge, and from information received from absolutely reliable sources, I know of the annihilation of 173 apiaries in the county, comprising 1,032 stocks, and I am convinced that these figures by no means represent the actual loss. And the saddest part of the whole business is the apathy of bee-keepers themselves. The County Bee-keepers' Association, always badly supported, and crippled in its educational work by lack of funds, now that the annual honey show in connection with the Horticultural Fête at Shrewsbury has been abandoned, is deserted by all its members, and derelict. Individual bee-keepers on all sides are making no effort to burn infected material and to clean off and disin-

fect their apiaries and appliances, and so stamp out the disease. This is one of the finest honey-producing counties in England! Can we be surprised at the spread of bee diseases? Can there be any doubt as to the need for legislation? Can we wonder at New Zealand and other countries capturing the honey trade?—GEORGE E. H. PRATT (Rev.), Sheinton, Salop.

BEES AND BULLETS.

LANCASHIRES' HOT TIME IN EAST AFRICA.

The *Natal Mercury* publishes an interesting account of the difficulties confronting the British fighting forces in East Africa, furnished by an officer in the East African Mounted Rifles.

"Of the ingenuity of the Germans," he said, "there can be no doubt, as the following incident will prove. The natives have a device whereby they place hollow logs up in the trees to enable the bees to construct their hives, and from these the natives collect the honey. In one place the Germans tied a whole lot of these logs together and attached them to a wire in the long grass. They also invented a device which caused a white flag to jump up above the grass when any one came into contact with the wire, this being the signal to them to turn a machine-gun on to that spot. A party of Lancashires had the ill-luck to stumble over that wire, with the result that dozens of the bee hives fell to the ground, and up sprang the white flag, revealing their whereabouts. The poor Lancashires immediately had bees and bullets to contend with, and between the two they had a hot time."

Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. All questions must be accompanied by the sender's name and address, not necessarily for publication, but as a guarantee of good faith. There is no fee for answering questions.

INQUISITIVE (Fife). *Queen Cast Out.*—The queen appears to be a virgin. We cannot state cause of death. She has probably been killed by a rival.

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices (not exceeding 7 lines) in this column, 10 lines charged 3s. 6d., up to 15 lines 5s., which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

June 27th to July 1st, at Manchester.—Royal Agricultural Society's Show, Bee and Honey Section, under the direction of the B.B.K.A. Prizes arranged in groups of counties for Associations affiliated to the B.B.K.A. Schedules from The Secretary, 23, Bedford Street, Strand, W.C. **Entries closed.**

Cannock Horticultural Show, Monday and Tuesday, August 7th and 8th. Eight Classes for Honey, &c., open to all. Good prizes offered. Jno. Bird, Secretary, 62, Allport-road, Cannock.

Special Prepaid Advertisements

Two Words One Penny, minimum Sixpence.

Will advertisers please read these Rules carefully in order to save trouble, as they will in future be strictly adhered to.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not permissible at above rate, but will be inserted at* 1d. *per word as* **"Business"** *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of* 3s. *per* ½*in., or* 5s. *per inch.*

PRIVATE ADVERTISEMENTS are only intended for readers having **Surplus Stock** *to dispose of.* **Driven bees, Nuclei,** *and* **Queens that are reared or imported for sale,** *are Trade Advertisements, and can only be accepted under trade terms.*

Advertisements must reach us NOT LATER than FIRST POST on TUESDAY MORNING for insertion in the "Journal" the same week.

Orders for three or more consecutive insertions in "The Bee Journal" entitle advertisers to one insertion in "The Bee-Keepers' Record" free of charge.

PRIVATE ADVERTISEMENTS.

SECTION RACKS, Lee's pattern, two dummies and springs, unused, 1s. 6d. each.—FRASER, 13, Manse-road, Markinch. v 81

WANTED, second-hand W.B.C. hives, and honey ripener, in good condition.—READ, 13, Park-road, Gravesend. v 82

ITALIANS, second swarms, 11s., package returnable.—CADMAN, Codsall Wood, Wolverhampton. v 84

THREE frame nuclei for sale, 20s.; Italians; splendid workers.—MISS PALING, Broadmere Common, Henfield, Sussex. v 85

EXTRACTOR wanted, in good condition.—Full particulars to HUNT, Denewood-road, Westmoors, Dorset. v 86

SALE, two good second-hand hives, three section racks, £1; particulars.—ANDERSON, 1, Mill Park, Annan. v 87

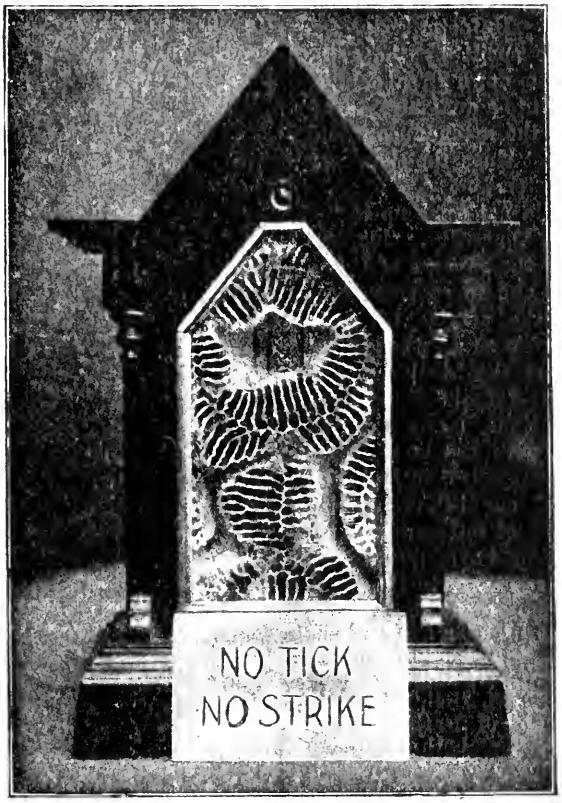
SIX new X.L. hives, 15s. each; 10 W.B.C. pattern, second-hand, little used, 12s. 6d. each.—Particulars, CURTIS, Brant House, Holbeach. v 78

WANTED, for educational purposes, piece of comb containing foul brood.—BRITISH BEE JOURNAL Office, 23, Bedford-street, Strand, London, W.C.

TO CLEAR.—Ten strong zinc roof hives, 7s. 6d. each; 50 section racks, complete, 3s. 9d. each; 12 racks shallow frames, new, 6s. each; 100 drawn out shallow combs, 5s. dozen, healthy; twelve Porter bee escapes, 1s. 6d. each; twenty excluder zincs, 1s. each.—X.Y.Z., "Bee Journal" Office, 23, Bedford-street, W.C.

PHOTOGRAPH of Comb in clock-case from which 7 lbs. of Honey was extracted. Seventy pounds were abstracted from the hive also. These Bees were badly affected by "Isle of Wight" Disease and treated by M. C. Pay of Croydon, and cured by IZAL washing, spraying and Izalized food. He had the hive given to him to be destroyed, May 24th, 1912, on which day he began his treatment.

"In IZAL they had placed in their hands a worthy and formidable weapon for battling against the bacillus."—*Sir James Crichton-Browne, F.R.S.*



IZAL is supplied by Royal Warrant to H.M. The King.

2 Teaspoonfuls Izal Fluid to 1 gallon of water for washing and spraying New Queen Bee inserted on June 12th, 1912.

In September 77 lbs. Honey taken from them. At present, June, 1915 descendants of the original diseased bees are quite healthy.

IZAL

is a Reliable Remedy against Foul Brood.

Sold Everywhere in Bottles, **6d.** & **1/-** each.

Ask for full details of IZAL treatment sent post free by

Newton, Chambers & Co., Ltd., Thorncliffe, nr. Sheffield.

THE ROYAL SHOW AT MANCHESTER.

One more Royal Show has passed, and taking into account the times through which we are passing, it has proved wonderfully successful. Unfortunately the last two days were spoilt by the rain, which at times came down in a deluge, turning the ground into a quagmire. Had it not been for this the attendance would have been the largest since the show was last held at Manchester.

The honey show did not come up to the usual standard for quantity, this, no doubt, being due to the ravages of "Isle of Wight" disease, and to so many bee-keepers being in the service of their country in one capacity or another, those left behind being so short-handed that making preparations for the show have been out of the question. Many were the comparisons made with the last Royal Show held at "Cottonopolis" in 1897, the Diamond Jubilee of our beloved Queen Victoria. How many of our veteran bee-keepers and exhibitors have, during the intervening 19 years, passed to the great majority, while others are no longer able to be present at the premier show of the year. Against the number of county trophies in 1897 there were this year only two, staged by Mr. A. S. Dell, of Leigh, and Mr. J. Pearman, of Derby. Both, as usual, were first-class, both in design and quality of the honey staged, Mr. Dell being awarded first prize. There was nothing in the honey classes calling for special mention. The wax classes were extremely good. Bee-keepers have improved so much in rendering and getting up their beeswax that a very good sample indeed is needed if it is to secure honours. There was only one entry in the novelty class, a combined winter quilt and feeder, made by Mr. J. Palmer, of Ranmoor, Sheffield. This, however, did not find favour with the judge, and no award was made.

Mr. Dixon showed a series of most interesting photographs taken at past Royal Shows, and included the prize-winning trophies at the 1897 show. There were also several groups where one could recognise old friends, and call to mind events at the shows at which the groups were taken.

Messrs. Jas. Lee and Son and Mr. W. P. Meadows staged their usual excellent display of appliances, but not for competition, adding a great deal to the interest and usefulness of the show.

As usual the honey extractors were a puzzle to those who are entirely ignorant of bee-keeping, or appliances for carrying it on. We not only heard one again described as a churn (one man remarking "it would soon fetch butter," as it was "geared up to 90"), but one man enquired of an attendant if they were "for weshing (washing) pertaters." A member of another group declared they were for mixing "dooah" (dough). Said he, "They hev these sooart o' things fer mixing dooah, they put in t' flaar an' watter an' barm, then turn t' handel an' mixes 'em aul oop." "Nay," put in another, "they're weshing machines." "Nay," was the reply, "they cuddn't get a blanket in 'em sittha."

The Lancs Bee-keepers' Association held their annual competition, and though the entries were not numerous the exhibits were of very good quality.

Mr. J. Pearman again secured the highest number of points, but having won the W.B.C. Gold Memorial medal last year was ineligible this year; he, therefore, takes the second prize, and the gold medal was won by Mr. A. S. Dell, of Leigh, with 11 points, Mr. G. J. Flashman being a good "runner-up" with 10 points.

A number of lectures were given in the bee tent during the show, and were well attended.

Mr. J. N. Bold, of West Derby, was judge. Mr. R. Parker, of Milnthorpe, undertook the duties of steward.

The following awards were made:—

HIVES AND APPLIANCES.

Classes 1 *to* 4.—Owing to the exceptional circumstances caused by the war, the exhibitors have consented to exhibit in these classes not for competition.

Class 5.—*Any Appliance Connected with Bee-keeping*, to which no prize has been awarded at a Show of the Royal Agricultural Society of England.—No award.

HONEY.

Classes 6 to 10 confined to Members of the Lancs B.K.A.

Class 6.—*Six Sections of Comb Honey of any year.*—2nd, A. S. Dell.

Class 7.—*Six Jars of Light Extracted Honey of any year.*—1st, P. M. Ralph; 2nd, J. Jones; 3rd, A. S. Dell.

Class 8.—*Six Jars of Medium and Dark Extracted Honey of any year.*—1st, J. Jones; 2nd, A. S. Dell.

Class 9.—*Six Jars of Granulated Honey of any year.*—1st, A. S. Dell; 2nd, J. Pilkington; 3rd, P. M. Ralph.

Class 10.—*Beeswax, in one Cake, to approximate* 1*lb.*—2nd, A. S. Dell.

Entries in Classes 11 to 14 can only be made by residents in Cheshire, Cumberland, Derbyshire, Durham, Herefordshire, Lancashire, Leicestershire, Lincolnshire, Monmouthshire, Northumberland, Nottinghamshire, Rutland, Shropshire, Staffordshire, Warwickshire, Westmoreland, Worcestershire, Yorkshire, the Isle of Man, Ireland, Scotland, or Wales.

Class 11.—*Twelve Sections of Comb Honey, excluding Heather Honey, of any year, approximate weight* 12*lbs.*—1st, A. S. Dell; 2nd, J. Pearman; 3rd, G. Marshall; r.n., Studley Horticultural College.

Class 12.—*Twelve Jars of Extracted Light-coloured Honey, of any year, gross weight to approximate* 12*lbs.*—1st, W. J. Cook; 2nd, J. Pearman; 3rd, Studley Horticultural College; r.n., A. S. Dell.

Class 13.—*Twelve Jars of Extracted Medium or Dark-coloured Honey, of any year, excluding Heather Honey, gross weight to approximate* 12*lbs.*—1st, T. Marshall; 2nd, Studley Horticultural College; 3rd, J. Pearman.

Class 14.—*Twelve Jars of Granulated Honey, excluding Heather Honey, of any year, gross weight to approximate* 12*lbs.*—1st, J. Pearman; 2nd, F. W. Jones; 3rd, T. Marshall; r.n., G. Marshall.

Entries in Classes 15 to 18 can only be made by residents in Bedfordshire, Berkshire, Bucks, Cambridgeshire, Cornwall, Devon, Dorset, Essex, Gloucestershire, Hampshire, Herts, Hunts, Isle of Wight, Kent, Middlesex, Norfolk, Northamptonshire, Oxfordshire, Somerset, Suffolk, Surrey, Sussex, or Wiltshire.

Class 15.—*Twelve Sections of Comb Honey, excluding Heather Honey, of any year, approximate weight* 12*lbs.*—1st, G. J. Flashman.

Class 16.—*Twelve Jars of Extracted Light-coloured Honey, of any year, gross weight to approximate* 12*lbs.*—1st, G. J. Flashman; 2nd, S. G. S. Leigh; 3rd, W. J. Goodrich.

Class 17.—*Twelve Jars of Extracted Medium or Dark-coloured Honey, of any year, excluding Heather Honey, gross weight to approximate* 12*lbs.*—1st, G. J. Flashman; 2nd, G. Bryden.

Class 18.—*Twelve Jars of Granulated Honey, excluding Heather Honey, of any year, gross weight to approximate* 12*lbs.*—1st, W. J. Goodrich; 2nd, G. Bryden; 3rd, G. J. Flashman.

MISCELLANEOUS OPEN CLASSES.

Class 19.—*Three Shallow Frames of Comb Honey, for extracting, gathered during* 1916.—No exhibits.

Class 20.—*Six Jars of Heather Honey, of any year, gross weight to approximate* 6*lbs.*—1st, J. Pearman; 2nd, W. Dixon; 3rd, M. J. Lamboll; r.n., A. S. Dell.

Class 21.—*Six Jars of Heather-mixture Extracted Honey, of any year, gross weight to approximate* 6*lbs.*—1st, J. Pearman; 2nd, A. S. Dell; 3rd, C. E. Smith; r.n., W. Dixon.

Class 22.—*Best and Most Attractive Display of Honey in any form, and of any year.*—1st, A. S. Dell; 2nd, J. Pearman.

Class 23.—*Exhibit of not less than* 2*lbs. of Beeswax, in two cakes only.*—1st, J. Pearman; 2nd, W. J. Goodrich; 3rd, T. Marshall; r.n., G. Marshall.

Class 24.—*Exhibit of not less than* 3*lbs. of Beeswax.*—1st, J. Pearman; 2nd, F. W. Frusher; 3rd, G. Marshall; r.n., W. Dixon.

Class 25.—*Honey Vinegar,* 1 *quart, in clear glass bottles.*—1st, Studley Horticultural College.

Class 26.—*Mead,* 1 *quart, in clear glass bottles.*—1st, J. Pearman; 2nd, Studley Horticultural College.

Class 27.—*Exhibit of a Practical or Interesting Nature connected with Bee Culture, not mentioned in the foregoing Classes, including Candy for Bee Feeding, Articles of Food or Medicine in which Honey is an ingredient.*—1st, A. S. Dell.

Class 28.—*Exhibit of a Scientific Nature, not mentioned in the foregoing Classes.*—No award.

ANCIENT BEE LITERATURE.

VI.—BEES IN LEGENDS.

Our first legend will not be about bees, but about *wax*. In the days of the notorious King Minos of Crete there lived a man Dædalus by name, famous in his day as an inventor; he was also an artist and a mechanician. He built two of the three temples to Apollo the sun-god, and he was credited with having been the first carpenter, and it was he who invented such tools as the saw, axe and gimlet. He also devised sails to drive ships. His most noted device was a species of aeroplane! Having to fly from Greece, he wished to reach Crete. So he fitted up a pair of wings for himself and another pair for his son Icarus. Mr. Cowan has reproduced two engravings, the first showing Dædalus fixing the wings with wax on his son, and the second illustrating the descent of Icarus into the Ægean Sea, facing page 16 in his book on "Wax Craft." The legend says that, having constructed wings of feathers, the father fixed them on his own

and his son's shoulders and then endeavoured to fly from Athens to Crete. Icarus, flying high, had the wax melted by the heat of the sun's rays and fell into the sea, being drowned. The father, more cautious, flew low and succeeded in reaching land. If any reader doubts the truth of the legend, let him look on a good map and he will find the island of Icarus still exists!

Our second legend, dealing with *mead* this time, relates to the story of the "Golden Fleece." Jason, Prince of Greece, sailed from Athens to fight the fabled Minotaur. The famous shipbuilder, Argos, constructed his ship. The Argo and the sailors were the well-known Argonauts. Many Athenians turned out on their departure to wish them good-luck. Just before setting sail they made their oblations and "poured a cup of mead upon the sea" as an offering to the gods. They were not content with that, but partook of the beverage themselves. They stored up a vast supply of food and "sweet mead, which cupbearers drew forth in beakers." Drinking each other's health and success to their adventure as they neared Circassia, we are told they "grasped a full goblet and drank off the pure, sweet mead." From this it would appear that the Southern as well as the Northern nations fortified their courage and courted the favour of the Fates by a liberal use of this drink, admired by gods and men.

Now for the *bees* in legend. Jupiter had his life saved by bees during his infancy. Melissa, the beautiful princess of Crete, was concerned in its administration, and the great Jove in a god-like way showed his gratitude to his preserver, or preservers. The story is told in two ways. In one form he is made to bless the bees; in the other, the fair Melissa receives in true celestial fashion the gratitude of a god. Nearly 300 years ago a great bee-master wrote as follows:— "Jupiter, for so great a benefit, bestowed on the bees, his nurses, for a reward that they should have young ones and continue their kind, without wasting themselves in venery." The much older form of the fable records that Melissa herself was changed by the god into a bee, with the same immaculate powers. From this fair princess the bees received their classic name of Melissa. Legends concerning *honey* are legion, because they are many. A charming modern writer, dealing with the lore of the honey-bee, informs us that, while biologists assert that hunting is the oldest human enterprise, he himself regards bee-keeping as by far the earliest occupation of primeval man, and he adds, further, that bees existed before the advent of man in perfect communal development. Druidical bards described our own land as the "Isle of Honey," and he naturally reasons from this that the natural conditions giving rise to the name were then prevalent, and reflected immemorially on the life of the people, and that honey and its products formed an important article of diet among all classes. Legend, however, existed and prevailed at a much later date than Druidical times. One of the earliest and most classic of our first able English writers on bees (about 1600) has this to say of honey:—"The greatest plenty of purest nectar cometh from above; which Almighty God doth miraculously distil out of the air, until either the bee's tongue or the sun's heat have drawn it away. If conjectures might be permitted, I would judge this *suck* to be the very quintessence of all the sweetness of the earth drawn up as other dews into the lowest regions of the air." Two very ancient writers ascribe its origin to the higher, not to the lower, regions of the air. Aristotle says:—"Honey falls from the air, principally about the rising of the stars, and when the rainbow rests upon the earth." Pliny tells us, "This substance is engendered in the air, mostly at the rising of the constellations, and more especially when Sirius is shining; never, however, before the rising of the Virgiliæ, and then before daybreak. Whether it is that this liquid is the sweet of the heavens, or whether a saliva emanating from the stars, or a juice exuding from the air while purifying itself, we know not. The bees accumulate this in their stomachs, deteriorated by the juices of flowers, and then they cast it up again through the mouth into the cells. Then it is subjected to repeated changes, and yet it affords us a most exquisite pleasure by its flavour, the result, no doubt, of its ethereal nature and origin."

One other legend in regard to bees must suffice. It is taken from Butler's "Feminine Monarchy":—"A certain simple woman, having some stalls of bees, which yielded not unto her desired profit, but did consume and die of the murrain, made her moan to another woman more simple than herself, who gave her counsel to get a consecrated host and put it among them. According to this advice she did so, which, when she had done, she kept it in her mouth, and being come home again, she put it into one of her hives; whereupon the murrain ceased and the honey again abounded. The woman, lifting up the hive in due time to take out the honey, saw there a chapel built by the bees, with an altar in it, the walls adorned by marvellous skill and architecture, with windows conveniently set in their places; also a spire and a steeple with bells."

Legend ascribes marvellous powers to honey. It breedeth good blood. It pro-

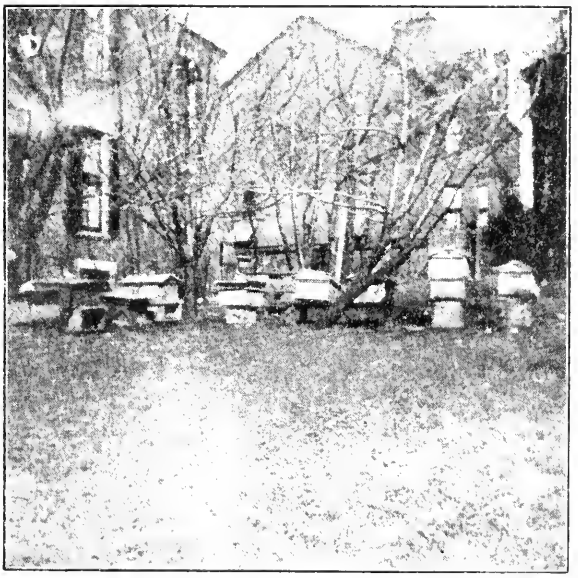
longeth old age. It is a sovereign medicament. It produces hair in baldness. It cures wounds and ulcers. It assists teething. The virtues of honey were described as transcendental, while mead was considered as a "sovereign" remedy, the best in the world for prolonging life.

M.

HELPING THE BEES FROM THE CITY LOTS.

By Felix J. Koch, Hearne Ave., Avondale, Cincinnati, O.

Possibly the suggestion may be an old one to you, but we have chanced on it only once, and there not alone did it redound manyfold to the good of the originator, but served to help the movement for the city beautiful, to say nothing of the improvement of the neighbourhood, in suchwise as to evoke the praises of all parties concerned.



A CITY BACK YARD APIARY.

Cincinnati, as the reader will probably remember, is a city whose business district hugs the Ohio, while behind the outer reaches of the stores and the tenements of the day labourers there rise and circle a chain of hills, upon which, in turn, the people of greater means make their homes. It is an endlessly long chain of hills this, a great semi-circle that goes from end to end of the town, and Cincinnati is a city only a few decades past her first centennial, and electric transportation, giving quick access to these suburbs, is only, say a quarter-century old. As a result there are still innumerable vacant lots, fields, and so on, on these hill slopes and the hill tops, and in places where the public fancy has not yet taken hold, there are entire summits standing bare.

The demand for timber in the good old ante-bellum days for firewood, leading to fagoting so close to town here, has denuded most of these fields of the forest primeval long since, and rain and weather generally have reduced them to the usual state of city lots. Nevertheless, they support a good verdure indeed, and the crop of weeds which will thrive on them is one any botanist would be proud of.

Taking this into account, the apiarist of the story made some slight investigation into the matter of weeds and seeds. Certain weeds, so called, have power to drive out others, to usurp the land to themselves. These must be his especial care, since, in his plan, there would be no one to even so much as actually plant the seeds, let alone to weed out the less desirable growth of the field and give the new-comers a chance.

Taking a hasty view of such hardy plants, the next point was to consider which among them would not only thrive well on being roughly sown, but, in turn, have no objection from the neighbours near nor to the owner of such property, as would result were Jack Roosa to be caught sowing thistles, or dandelion, perhaps, on the lots of other men on the heights, where

these would not only give the property a disreputable look, and so force on it a degree of decline, but produce a seed which the breezes would carry to adjacent lawns and there plant, he might find himself in a bad position very soon. Continuing his studies, therefore, Friend Apiarist then narrowed down to certain plants here.

Out of this list, then, he still again considered the property-holders and neighbours. He would sow such plants as would not only do no harm to the lots, but cover them with a delicate carpet out of blossom-time, and make them things of beauty when in blossom.

Finally, when the list had again been narrowed to those, there came the consideration of honey-giving qualities, and, out of those still left, the matter of ease in securing seed and of the sowing on the lots.

The final upshot of it all was that, for the great American middle-west, our friend found that the common yellow mustard—the wild mustard they dub it in Ohio, for it has so long escaped the bounds of farms that it grows at every wayside—and the tall, sweet-scented clover, or melilot, served to fill the bill best of all.

A complicated discovery? Not at all. Back and forth to work, when in the cars, it is as much fun as a puzzle to build a list of all likely flowers, then eliminate, turn in turn, as above.

However, once the decision was reached the rest was simple enough. There are few things cheaper than cheap grades of seeds, and in this case old seed, damaged seed, any grade of seed would do; it was a case of quantity, that was all.

When trade was dull, a " nickel " fare on the cars took one to the heights, and one strolled in the fields and vacant lots and sowed what seed one had. Evenings, when there was nothing else on hand, one might as well stroll to some other such lot and sow the seed. Where owners were not about, one sowed forthwith; where they were, one asked permission, and rare the case that the owner did not see how much more attractive, much more saleable, would be that lot, clad in green, in white, or in yellow, than as it lay exposed now.

However, all of that explains itself; where one was refused, he went on elsewhere.

THE CLOVER IS ALSO A POSSIBILITY.

The point is that before so very long all the great hill-top at Fairview Heights was one great field of mustard and sweet clover, and people, city dwellers particularly, delighted to ride in the summer evenings, on the open cars, just for the sake of the whiff of the perfume which these waving fields gave forth. Whatsoever the Biblical injunction may be anent sowing tares, there is other reference in Bible of vales of honey as well, and up here on the heights over Cincinnati one had hill-tops, if not valleys, of honey.

Naturally, the apiarist had selected for his work the locality nearest his city hives; and, naturally, those bees were not long in discovering the flowers.

They profited as bees in city hives, or bees even in the gardens of the suburbs of a large town, could hardly do; and therein lies the suggestion for other men.

Though located at the city's heart, as is one apiarist that we know of, there is always room for some hives; if nowhere else, then on your roof; and hardly a city, short of London, Paris, New York and perhaps San Francisco, but has abundant vacant lots still, to be sown as described herewith, within reach of the average bee flight. Where a man intends to make bee-keeping a profession, instead of merely avocation or source of pin-money, he will, of course, find it paying to move to some point near city limits as will allow his bees to reach more such fields still.

The photos give an idea of a backyard apiary in Cincinnati, out in the suburbs, for pleasure as well as such profit as may be made, which would also be helped greatly by such sowing, and, again, providing a scene in the vast fields of sweet clover covering such new sub-divisions, showing now attractively they cover the fields for the owner and hide any of the defects of surface from view.

THROUGH THE SWEET CLOVER.

NAPHTHALINE AS AN INSECTICIDE.

By Dr. A. F. Bonney.

From my first experience with bees I was not satisfied with bisulphide of carbon as an insecticide, as the vapours are very explosive, dangerous to inhale and extremely fugitive. I was on the outlook for something without these disagreeable features, and I have, I believe, found it in naphthaline, to which I gave a thorough test in the summer just past by using nothing else in my yard, with the result that I did not lose an ounce of comb, although there were several piles of hives filled with brood-comb exposed out-of-doors from the middle of May until well into June. To make more certain I purposely exposed a sheet of brood-comb, then removed it to the honey-house, put it in a pasteboard box with a couple of small balls of naphthaline and never saw a worm.

Naphthaline in the form of little balls is called "Moth Balls," and is used by housewives to repel moths from fur garments. It is also known as "Tar Camphor," for in a moulded mass it much resembles gum camphor physically. Naphthaline is a benzine hydrocarbon with a chemical formula of $C_{10}H_8$; it forms white crystalline leaflets, has a peculiar and not disagreeable odour suggestive of coal tar, volatilises at all temperatures above freezing and more rapidly the warmer it gets; melts at about 155 degrees Fahr. Its vapours kill most fungi and most insects.

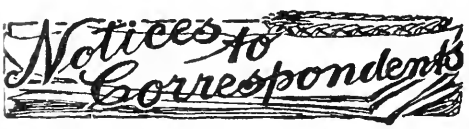
A curious thing about this substance is that if a hive is full of the odour and there is honey in it the bees will go in and do not seem to mind the smell nor suffer any inconvenience. It may not be poisonous to them, or it may take prolonged exposure to the drug to cause death in any insect or its larva.

Just now the price of naphthaline is

high compared with a year ago, when it was abundant at 7 cents wholesale, but even at 30 cents, the present price, it is a cheap germicide for the beekeeper, as a couple of naphthaline balls weighing about one-fourth of an ounce will protect the combs for weeks, if not months. It is moulded into balls, so it may be put into any shape by heating in a tin dish set in boiling water. Little sheets or cakes weighing half an ounce would be a good size, and moulds can be made of thin pieces of wood, which must be wetted when used. —*American Bee Journal.*

BEESWAX.

Out of forty samples of Indian beeswax examined in London on behalf of the Russian authorities, only four were pure, the remainder being more or less adulterated, chiefly with paraffin wax. If consignments of pure Indian wax can be offered regularly on the London market it is probable that India will be able to secure a large part of the Russian trade in beeswax, which was valued in 1913 at over £600,000, of which the amount contributed by Germany was valued at no less than £560,000. The exports of beeswax from India are not recorded separately, but in 1913-14 the exports of wax of all kinds, no doubt almost entirely beeswax, were only 8,881 cwts., of which 2,604 cwts. went to Great Britain and 3,849 cwts. to Germany.—From the *Financier and Bullionist.*



Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. All questions must be accompanied by the sender's name and address, not necessarily for publication, but as a guarantee of good faith. There is no fee for answering questions.

ANXIOUS TO KNOW (Kilwinning).—(1) It appears to be pure, but rather old. (2) We cannot say. It would need examining by a skilled bacteriologist to be certain. (3) Yes, we would have no hesitation in using it ourselves.

Suspected Disease.

CWMGLAS (Wales).—The comb contains foul brood of very old standing.

F. H. TOMSON (Suffolk).—There is odourless foul brood and sour brood in the comb.

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices (not exceeding 7 lines) in this column, 10 lines charged 3s. 6d., up to 15 lines 5s., which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

Cannock Horticultural Show, Monday and Tuesday, August 7th and 8th. Eight Classes for Honey, &c., open to all. Good prizes offered. Jno. Bird, Secretary, 62, Allport-road, Cannock.

Special Prepaid Advertisements

Two Words One Penny, minimum Sixpence.

Will advertisers please read these Rules carefully in order to save trouble, as they will in future be strictly adhered to.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not permissible at above rate, but will be inserted at* 1d. *per word as* **"Business"** *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of* 3s. *per* ½*in., or* 5s. *per inch.*

PRIVATE ADVERTISEMENTS are only intended for readers having **Surplus Stock** *to dispose of.* **Driven bees, Nuclei,** *and* **Queens that are reared or imported for sale,** *are Trade Advertisements, and can only be accepted under trade terms.*

Advertisements must reach us NOT LATER than FIRST POST on TUESDAY MORNING for insertion in the "Journal" the same week.

Orders for three or more consecutive insertions in "The Bee Journal" entitle advertisers to one insertion in "The Bee-Keepers' Record" free of charge.

PRIVATE ADVERTISEMENTS.

3-FRAME NUCLEI FOR SALE, Italians, splendid workers, guaranteed healthy.—MISS PALING, Broadmere Common, Henfield, Sussex. v 93

VIGOROUS HYBRIDS.—3-frame nuclei, 1916 queens, 15s.; four frames, 17s. 6d.; swarms, 15s.—BOWREY, Swallowfield, Reading. v 98

MARRIED MAN (35), exempt, seeks situation, fruit, poultry, &c., farming, used to bees; would consider purchase of bees and poultry business.—MORTON, Bolehill, Wirksworth. v 97

QUITE new, 4 dozen standard frames, wired; full sheets of foundation, British weed; exchange Silver Campine pullets.—Apply, S. COCKS, Napton, Rugby. v 96

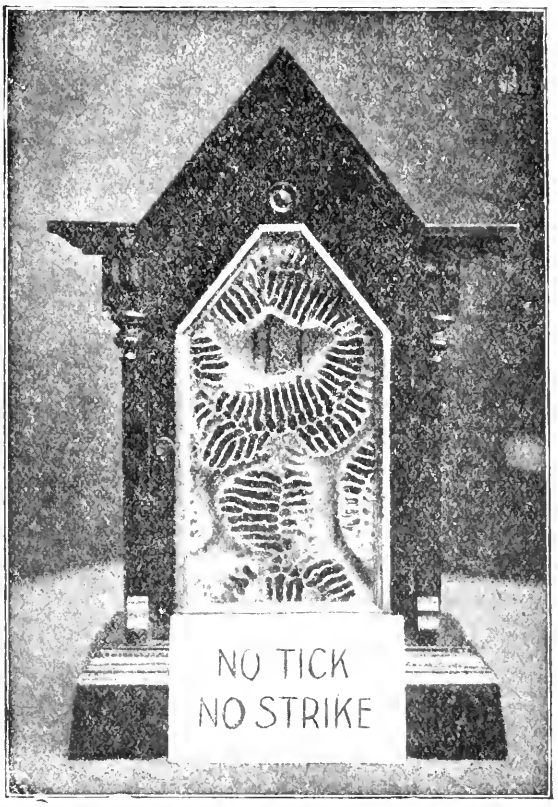
HYBRID Virgins, vigorous strain, few over from restocking scheme, 3s.—JUDGE, Secretary C. & D. B.K.A., Shepherd's-lane, Dartford. v 95

TWO strong stocks of bees, in skeps, 15s. each; guaranteed healthy; safely packed.—J. MOORE, Bleasley, Notts. v 94

GIVING UP BEES.—FOR SALE, two W.B.C. hives, honey and wax extractors, tins, strainers, &c., shallow frames worked; best offer accepted.—HARDY, Aldbrough, Hull. v 92

PHOTOGRAPH of Comb in clock-case from which 7 lbs. of Honey was extracted. Seventy pounds were abstracted from the hive also. These Bees were badly affected by "Isle of Wight" Disease and treated by M. C. Pay of Croydon, and cured by IZAL washing, spraying and Izalized food. He had the hive given to him to be destroyed, May 24th, 1912, on which day he began his treatment.

"In IZAL they had placed in their hands a worthy and formidable weapon for battling against the bacillus."—*Sir James Crichton-Browne, F.R.S.*



IZAL is supplied by Royal Warrant to H.M. The King.

2 Teaspoonfuls Izal Fluid to 1 gallon of water for washing and spraying New Queen Bee inserted on June 12th, 1912.

In September 77 lbs. Honey taken from them. At present, June, 1915 descendants of the original diseased bees are quite healthy.

IZAL

is a Reliable Remedy against Foul Brood.

Sold Everywhere in Bottles, **6d.** & **1/-** each.

Ask for full details of IZAL treatment sent post free by

Newton, Chambers & Co., Ltd., Thorncliffe, nr. Sheffield.

A ROLL OF HONOUR.

Although bee-keeping is considered a minor pursuit, we venture to say that it has provided more fighting men than the usual average of any industry. To place on record the part the members of our craft have played in the present war we propose to make a "Roll of Honour," and shall be pleased if our readers will forward us the NAMES and ADDRESSES, together with the REGIMENT and RANK, of any bee-keeper serving his King and Country at home or abroad; also if killed or wounded.

We print a further list of names to those sent in, and shall be pleased to have other names as soon as possible.

Q.-Mast.-Sergt. H. Ingham, 1/2 Field Amb., B.E.F., France.

BRITISH BEEKEEPERS' ASSOCIATION.

The Monthly Meeting of the Council was held in the Secretary's Office, Hives and Honey Department, Royal Show Ground, Manchester, on Thursday, June 29th, 1916. Mr. A. G. Pugh presided, and there were also present Mr. G. Bryden, Association representatives, Messrs. J. Steel (Cumberland), J. Price (South Staffs.), E. W. Franklin (Cheshire), J. Pearman (Derby), and the Secretary, W. Herrod-Hempsall.

Letters expressing regret at inability to attend were read from Miss M. D. Sillar, Messrs. T. W. Cowan and C. L. M. Eales.

The minutes of Council Meeting held on June 15th were read and confirmed.

Mr. C. Clark was elected a member.

The report on the paper work for the Final Examination was presented, and it was decided that the following be asked to take the lecture test:—Messrs. E. Hollingsworth, S. Leedham, W. Thorne, W. E. Moss, and H. W. Cousins. A vote of thanks to Mr. Macdonald for marking the papers was passed unanimously.

The report on a Preliminary Examination held at Crayford on June 17th was presented, and it was resolved to grant certificates to Messrs. E. Minchin, W. H. Prior, A. C. Paulin, E. C. Read, F. Broughton, F. C. Hodgson, C. F. Gee and A. C. Paul.

A question being asked as to the progress made with regard to finding a cure for the "Isle of Wight" disease, it was pointed out that there is as yet no known cure. The information was also given that the Association are experimenting and doing all in their power to find a cure and that they hope, in the near future, to be able to report that a cure has been found.

Mr. Pugh having welcomed those delegates who had not attended a Council Meeting previously, the meeting closed.

Next Meeting of Council, Thursday, September 21st, 1916, at 23, Bedford Street, Strand, London, W.C.

BLURTS FROM A SCRATCHY PEN.

ROYAL SHOWS AND THEIR WORK.

Another Royal Show has gone! Another notch cut in the staff of time. How they do increase. 1874-1916—forty and two years! We begin to feel veterans. Another year or two, and we shall talk about our jubilee, and those old shows we remember so well. We have something of a sad satisfaction in conning them over. We have a vivid mental photograph of those good old faces we used to meet, we know exactly the very spot where we met them, and the bee chat we had. I am afraid the praiser of by-gone times has to dare a sneer in these days of going the pace—he is a dawdler, a laggard falling out of the marching ranks. To dispute the advantages we have nowadays would be idiotic. Yet tell me, at rock bottom, are we any happier in ourselves, in our homes, in our social intercourse? I trow not.

And these Royal Shows. There is a rumour in the wind (I hope it is nothing more) that stress of these times of war may stand in the way of their future. God forbid it. Slow, but sure and steady, they have blasted a chasm into that rock of ignorance of all things agricultural (and apicultural), and they have yet to shiver it to atoms. In this they are doing a work equally as patriotic as that of the army which fights. In proportion as we increase our capabilities of home production, as we increase the qualities and values of our flocks and herds, of our crops and pastures, so we increase our own home comforts, and our possibilities against any accidents that may befall us. We are more self dependent, and is not this exactly what Royal Shows have aimed at? To take our own speciality as an example. Has not the annual show of honey and hives been one of the most important factors in the advance of bee-keeping? It has aroused interest, given

information, and initiated the desire to commence.

GIVEN INFORMATION.

In the cities and towns the ignorance on all that happens in the fields and woods is crass and deplorable. The citizen buys his vegetables off the greengrocer, his meat off the butcher, and his eggs and poultry off the dairyman. They are there for him to buy as a matter of course, but how they are got there is quite outside his knowledge, and possibly even of his curiosity. I can assure you it is absolutely true that I overheard a serious, and heated, debate outside a butcher's shop one Christmas, when he was exhibiting his purchase for slaughter, as to whether the animals they were looking at were calves or goats, one bystander even said they were sheep! How many townspeople know the different songs of the birds, and, to come back to ourselves, how many know a bee when they see it? The other day, at our new apiary at Golders Hill Park, one asked me (and from his appearance he should have known better) if they were wasps I was handling, and if they gathered honey. Another (a lady) was exceedingly inquisitive—if I was training the bees for war purposes. How she established any connection between the two I really cannot tell.

Multitudinous are the things which, according to general report, are to occur "after the war." But I do not think there is the shadow of the shade of a doubt that we shall be compelled, and shall find it very much to our interests, to develop our agricultural industries. The longer I live the more certain I become that it is rendering good service, not only to ourselves (we are all a bit selfish) but to the country to boom bee-keeping. Lectures and shows are doing their part well, but there is that silent advertisement which tells. Talk about it to your neighbours, and as an object lesson show how the trees in his orchard are weighed down with fruit because of the bees. No doubt, until you enlighten him, he has run away with the idea that the sole object of the bee's existence is to make honey, which is secondary to fruit fertilization.

J. SMALLWOOD.

REVIEW.

Fourth Annual Report of the State of Iowa, by the State Bee Inspector, Frank C. Pellett, in which is included the report of the Iowa Beekeepers' Association for 1915.

The report is well got-up, and a perusal of its pages goes to show how the industry of beekeeping is fostered by the American Government, in comparison with the apathy of our own. Beekeeping may be a small industry, but its importance in relation to the fruit growing industry is clearly shown in this report.

On page 9 is a photograph of the members of the State Inspectors' Conference, held in November, 1914, and we can count 54 present, while in Great Britain we do not possess a single Government officer in connection with apiculture, they being satisfied with splitting up the work amongst several people who are supposed to have a smattering of things apicultural, and when a subject or difficulty arises that is too complex for them to solve, they apply for the gratuitous services of the practical men amongst us who do know.

Not only is it a Report, but the book supplies much useful information on such subjects as "Pollination of various Flowers," "Honey Vinegar," "Wintering," "How to Cure Foul Brood," "How to Prevent Drones," "Effect of Drought on Honey Yield," "Food Value of Honey," "How to Prevent Swarming," "How to Make Increase," "Influence of Soil on Honey," etc., etc.

It also shows very clearly the great advantage of legislation in dealing with bee diseases.

The value of the inspectors' work is shown from the figure of 6,669 colonies examined.

It is also shown that sweet clover is a great nectar yielding plant, the following being the average yield per stock in the districts growing this plant:—

Alabama, 200 lbs.
Colorado, 70 to 125 lbs.
Kentucky, 150 to 200 lbs.
South Dakota, 100 lbs.
Illinois, 100 lbs.

WEATHER REPORT.

WESTBOURNE, SUSSEX.

June, 1916.

Rainfall, 2.53 in.	Minimum temperature, 33 on 8th.
Above aver., .53 in.	Minimum on grass, 28 on 8th.
Heaviest fall, .36 on 23rd.	Frosty nights, 0.
Rain fell on 16 days.	Mean maximum, 69.1.
Sunshine, 188.3 hours.	Mean minimum, 46.2.
Below aver., 48 hours.	Mean temperature, 53.1.
Brightest day, 17th, 12.7 hours.	Below aver., 4.2.
Sunless days, 1.	Maximum barometer, 30.123 on 16th.
Maximum temperature, 64 on 20th, 25th, 27th, and 28th.	Minimum barometer, 29.374 on 5th.

L. B. BIRKETT.

HELPFUL HINTS FOR NOVICES.

By W. Herrod-Hempsall.

QUEEN-REARING AND INTRODUCTION.

(*Continued from page* 203.)

We will suppose that arrangements have been made for securing the queen required at a definite time. The first thing is to be absolutely certain that the stock to which she is to be introduced is without a queen. If it has been apparently queenless for some time careful search should be made to see that by no chance is a virgin present. If a fertile queen is present she must be caught and killed. This can be done by a careful examination of the combs, not by taking out the central one first with the idea that she is bound to be there and time thus saved. As the bees have been disturbed with the subjugator, and are not in a normal condition, she may be anywhere; therefore, start with an outside comb and go carefully through until she is found. As each comb is removed watch on the floor-board, for in the autumn queens are very prone to go on to the floor-board immediately the smoke or carbolic is applied. If she cannot be found in this way by the beginner, which is often the case, then another plan must be adopted. Place a sheet of excluder zinc over the entrance of the hive, so that all bees entering must go through it. A board sloping from the alighting-board to the ground, as for hiving a swarm,

FIG. 85.

must also be used. Take the combs one by one, commencing at one side and going right through, shaking the bees on to the board; the workers run back into the hive, but as the queen cannot pass through the excluder, she is left outside, and can easily be captured. Both these operations are best carried out in the evening, so that undue excitement will not induce the bees to rob, as they will have the night to settle down before commencing to fly. If carried out in the daytime trouble may ensue, the bees becoming demoralised through robbing and fighting.

The colony should remain queenless for at least twenty-four hours; this will induce them to accept an alien queen more readily.

A very simple and inexpensive cage for the introduction of queens is the "Pipe Cover Cage," already illustrated. It consists of a dome-shaped piece of wire cloth with a narrow tin rim round the bottom. The old-fashioned tea-strainer, which is attached to the teapot by means of a couple of wires forced down the spout, and which can be purchased at any ironmonger's shop or penny bazaar, makes an

admirable cage when the attachment wires are removed. The manipulation of this cage is very simple if the following instructions are carefully followed. Take a post-card and place the cage upon it so that it projects over one edge about ½in., Fig 85, instead of right on the card. If this is done one edge of the cage has to be lifted up, and when several bees are in they either escape or the one being put in is crushed, especially the queen. If the edge is left over no movement of the cage is necessary, as bees always run up hill they will go in when liberated from the finger and thumb, with their head just inside, as shown; when inside they continue to run round on the dome of the wire cloth and do not come down to the opening. Put

Fig. 86.

Fig. 87.

inside about six workers, catching them by the wings, from the same stock as the queen to be introduced. If the queen has come by post then her attendants must be put in with her. In this case it is best to carry out the operation in a room, letting both workers and queen out on to the window, from which they can readily be picked; if attempted out of doors they may escape. Catch the queen last, and in doing so be careful not to take hold of the abdomen, or serious injury may result. The best way for the beginner to handle a queen is by the wings, as shown in Fig. 86.

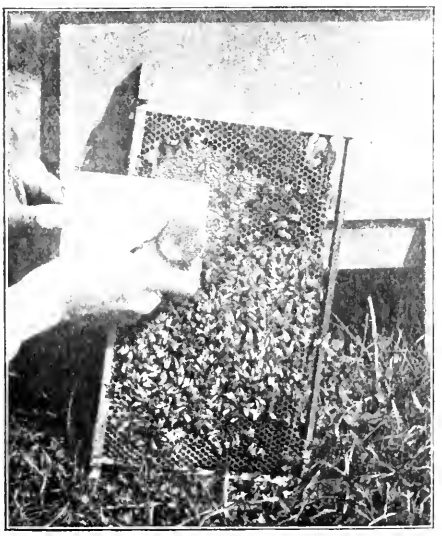


Fig. 88.

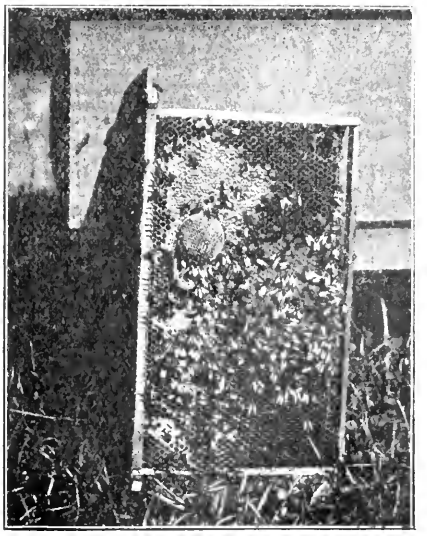


Fig. 89.

Grip the wings on both sides and hold on to them; she will not tear them out by her struggles, which is the fear of the beginner the first time he handles a queen in this way. After a little practice she can be taken by the thorax, Fig. 87. Put her head over the edge of the card inside the cage and release her wings, when she will run into the cage; then push the cage on to the card, so that there is no fear of the

bees escaping. The next thing is to remove a comb from the stock to which the queen is to be introduced—for comfort in working it is better to shake it clear of bees. Rear it up, and place the cage and card in position over food, as shown at Fig. 88, holding the card tight to the comb by pressure on the cage. Withdraw the card, and with a screwing movement force the cage into the comb, so that the tin rim is embedded its full depth, as seen in Fig. 89. Close space a couple of combs in the middle of the hive to give room, so that the cage will not be disturbed when putting in or taking out the comb. The queen can be released at the end of twenty-four hours by lifting off the cage. When this is done watch her for a minute or two to see that she is accepted. If there is the slightest sign of balling, cage her again alone, or with young bees just emerged from the cells, for a few hours, then release and watch again.

(To be continued.)

CRAYFORD AND DISTRICT BEE-KEEPERS' ASSOCIATION.

After a fortnight of wet and cold weather rarely experienced in June, which made the bee-keeper despondent and anxious and left the stocks hungry and irritable, a delightful break of real summer was awarded us for our second summer meeting which was held at Maypole House, Dartford Heath, and well attended by some 70 members on Saturday, June 17th.

Mr. Herrod-Hempsall (who came down to examine the candidates for the B.B.K.A. certificate) was prevailed upon to give a lecture, and as there are so many new members just starting bee-keeping he was asked to adapt his remarks for their special benefit. This was prefaced by a great surprise to most of us, by the introduction of a silver cup given to the Association by a donor who wishes to remain anonymous until the Honey Show in August. The lecturer congratulated the Association, and referred to this cup as being the best in the country; the terms of the competition are as yet undecided, but will no doubt be a great stimulant for keen competition among the members.

He then proceeded with the lecture, dealing with the subject in his usual masterly fashion, first pointing out that bees were most beneficial to good fruit production, and they should play a specially important part in Kent; and then went carefully through the various stages, from starting by the purchase of a swarm to marketing the produce, as well as referring to the natural history and characteristics of bees, and giving sound advice as to hives, etc., all of which must have been very welcome to our new members.

The lecture was followed by tea, which was more than ever welcome owing to the warm day, and was served in admirable fashion by our Ladies' Refreshment Committee. Our President, Mr. Dewey, stated that owing to our largely increasing membership the funds of the Association did not permit of free refreshments, and a box was placed for voluntary donations which he hoped would make this enjoyable social branch self-supporting. At the conclusion of tea, the company were invited to the apiary, where Mr. Herrod-Hempsall went through the manipulations and practical part of bee-keeping, which concluded his lecture.

A hearty vote of thanks was accorded the lecturer for his valuable services, and our President took the opportunity of proposing a vote of thanks to the Secretary, Mr. Judge, who has worked most laboriously at the re-stocking scheme. There are now 58 nuclei nearly ready to distribute amongst the members, and it is his devotion, perseverance, and undeniable skill which has produced such grand results, and this in addition to secretarial duties, which are heavy and increasing.

In replying, Mr. Judge said he felt his labour of love to be of benefit to the community, and was hoping soon to be able to distribute healthy and vigorous nuclei which will rapidly develop into strong stocks.

Once again the Association is indebted to Mr. and Mrs. Knight for the use of their grounds, which always insures a successful and enjoyable meeting.

The next demonstration will be held at Mr. Paulin's Apiary, Brackenhurst, Dartford Heath, Saturday, July 15th, 4 p.m. (adjoining the Association Apiary). All persons interested are cordially invited.—A. C. P.

The Hon. Secretary will be glad if Mr. Hunt, of Greenwich, who attended the meeting at Maypole House on June 17th, will communicate with him.

[This report has unavoidably been held over.—EDS.]

ITALIAN BEES AND "ISLE OF WIGHT" DISEASE.

[9292] In B.B.J. for June 29 there appeared an article signed "Native" (9290, page 203), which I read with some interest. In it the writer says that the effort that is being made to secure resistant and immune bees is, in his opinion, responsible, at any rate to a great extent, for the spread of the disease called "Isle of Wight" disease—or so I gather. I really think, Mr. Editor, that some explanation is required, since, if this is the case, where are we? Does "Native" mean to say that all effort to breed "immune or resistant" stock is really a step in the wrong direction? If so, it seems that we are to simply stand by and see the stock of the whole country swept away. "Native," of course, writes from the point of view that Italians are to blame and those who keep and breed them, but surely if you breed an "immune or resistant" stock of native bees they will be just as much a danger from "Native's" point of view. I maintain that if, as I and many others have found, Italian bees are more immune and resistant to disease than Natives, that fact, at any rate, may be regarded as a great asset. Personally I am against importing bees at all. We surely have sufficient stock in the hands of our leading breeders to produce the very best of bees without going abroad. The difficulty of procuring true mating is and can be surmounted in this country.

I have lost stocks from the disease and saved some that have become affected, and made good stocks of them, and cannot in the least follow "Native" when he says (at end of page 204) that "*their progeny may survive. . . for a year or two while suffering from disease.*" Is this probable? Is it not much more likely that these survivors are not suffering at all? I often think that in speaking of "curing" bee diseases we are apt to forget that that is a wrong term. We do not try to *cure* we try to prevent. What I mean is that once a bee is affected the quicker it is dead the better. What we try to do is to *prevent* the disease spreading and wiping out the entire stock. We probably shall never free the bees generally of the bacilli of disease, the various stages will probably always be present in our bees, but when we have produced, or rather, when Nature with our assistance has produced an immune stock of bees to repopulate the country till the germs which cause this disease will have no more terrors for the beekeeper.

Now if this end can be attained I imagine there are few beekeepers who would care one straw whether the immune stock was Italian or any other variety provided that they were a good, prolific bee and a profitable one, and if, as many think, Italians are ahead of the Natives in this respect, surely we should do our best to produce as many of them as possible. My own experience is all in favour of a good-class of Italians and therefore I keep nothing else.

R. B. Manley.

THE HIVE AT GETTYSBURG.

By J. G. Whittier.

In the old Hebrew myth the lion's frame,
So terrible alive,
Bleached by the desert's sun and wind, became
The wandering wild bees' hive:
And he who, lone and naked-handed, tore
Those jaws of death apart,
In after time drew forth their honeyed store
To strengthen his strong heart.

Dead seemed the legend; but it only slept
To wake beneath our sky:
Just on the spot whence ravening Treason crept
Back to its lair to die,
Bleeding and torn from Freedom's mountain bounds,
A stained and shattered drum
Is now the hive where, on their flowery rounds,
The wild bees go and come.

Unchallenged by a ghostly sentinel,
They wander wide and far,
Along green hillsides, sown with shot and shell,
Through vales once choked with war
The low reveillé of their battle-drum
Disturbs no morning prayer;
With deeper peace in summer noons their hum
Fills all the drowsy air.

And Samson's riddle is our own to-day,
Of sweetness from the strong,
Of union, peace, and freedom plucked away
From the rent jaws of wrong.
From Treason's death we draw a purer life,
As, from the beast he slew,
A sweetness sweeter for his bitter strife
The old-time athlete drew!

Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. All questions must be accompanied by the sender's name and address, not necessarily for publication, but as a guarantee of good faith. There is no fee for answering questions.

T. W. MOORE (Bournemouth). *Destroying Wasp Nest Suspended in Bush.*—Hang a piece of cotton-wool, saturated with a solution of cyanide of potassium, near the entrance to the nest.

"OPTIMIST" (Northumberland) *Feeding for Winter.*—If the bees do not store and seal enough honey for wintering by the end of August, they should be fed on thick, warm syrup during September, until they have in all about 30lbs. of sealed stores, and only if supplies run short in winter should candy be given. The quantity needed will, of course, depend on the amount of stores in the combs, usually a 1lb. or 2lbs. cake of candy is placed over the cluster and renewed as the bees use it. Candy alone should not be depended upon for winter stores.

J. G. (Acklington). *Swarm Returning to Hive.*—This usually occurs through the swarm losing the queen. In your case, it would appear that for some reason the queen returned to the hive, why, we cannot say. It is impossible to give a reason for everything bees do. Bear in mind the old saying, "Bees do nothing invariably."

J. R. (Warwicks).—It is late to start with a swarm now (if you can procure one) It may be done, but you will probably have to do a fair amount of feeding. Your best plan will be to get an established stock or a five- or six-frame nucleus. A swarm should be bought by weight, about 2s. 6d. per lb. would be a fair price now, and it should weigh 4lbs. to 5lbs. A nucleus might be purchased at from 3s. to 5s. per comb. You can get a hive for from 14s 6d. to 30s., the price depending on the type of hive and the fittings, send to our advertisers for catalogues. You could manage by yourself with the help of a good hand-book. Get "Bee-keeping Simplified," 6d., post free 7d., or "The British Bee-keepers' Guide Book," 1s. 6d., post free 1s. 8½d., from this office. It is, of course, a great help if you can get advice from a practical bee-keeper, and see him manipulate the bees. Join the Warwickshire B.K.A., you will get particulars from the Hon. Secretary, Mr. J. Ingerthorpe, Knowle. We can only answer your second query fully if you send stamped addressed envelope or post card.

J. SKEVER (Ayrshire).—They will probably be safe if you spray them with a disinfectant and water. Formalin would be best, add 7ozs. water to each ounce of liquid Formalin of full strength—40 per cent.

WORKMAN (Ayrshire).—(1) It is advisable to requeen every year. (2 and 3) The bees from the two colonies would probably fight. Better follow the plan given on page 94 of "The British Bee-keepers' Guide Book." On a fine day remove five combs containing brood and eggs from one colony, brushing or shaking the bees back into the hive. Place these combs into a new hive, and fill up both hives with frames containing comb foundation or comb. Move the other stock to a new stand, and place the new hive in its place, the flying bees will return to it, and should be given a laying queen.

Suspected Disease.

J. EVANS (Bath). H. REID (Bentham), SUBSCRIBER (Sheffield), R. W. (Boughton), T. E. S. (Slough), SPINK (Basingwold).—The bees are suffering from "Isle of Wight" disease.

E. T. ENGLISH (Wrexham).—The bees are suffering from "Isle of Wight" disease. The outward symptoms vary. The first to be noticed is the bees are listless and disinclined to work. Later on numbers may crowd the alighting-board or crawl on the ground and herbage, unable to fly. The abdomen may be swollen, wings appear dislocated, hind legs paralysed, sometimes the excrement is voided on the hive roof and alighting-board and on the ground and herbage near, and the inside of the hive badly soiled. The body and wings of the bees tremble, and the back of the abdomen is frequently stroked with the hind legs, as though the insect was in pain. All these symptoms will not be seen in every case.

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices (not exceeding 7 lines) in this column, 10 lines charged 3s. 6d., up to 15 lines 5s., which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

Cannock Horticultural Show, Monday and Tuesday, August 7th and 8th. Eight Classes for Honey, &c., open to all. Good prizes offered. Jno. Bird, Secretary, 62, Allport-road, Cannock. Entries close August 1st.

Special Prepaid Advertisements

Two Words One Penny, minimum Sixpence.

Will advertisers please read these Rules carefully in order to save trouble, as they will in future be strictly adhered to.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not permissible at above rate, but will be inserted at* 1d. *per word as* "**Business**" *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of* 3s. *per* ½*in., or* 5s. *per inch.*

PRIVATE ADVERTISEMENTS are only intended for readers having **Surplus Stock** *to dispose of.* **Driven bees, Nuclei,** *and* **Queens that are reared or imported for sale,** *are Trade Advertisements, and can only be accepted under trade terms.*

Advertisements must reach us NOT LATER than FIRST POST on TUESDAY MORNING for insertion in the "Journal" the same week.

Orders for three or more consecutive insertions in "The Bee Journal" entitle advertisers to one insertion in "The Bee-Keepers' Record" free of charge.

PRIVATE ADVERTISEMENTS.

TWO clear. Porter escapes, slightly soiled, 1s.; feeding-bottles, with stages, 1s. each; section racks, complete, 3s 9d.; drawn out shallow combs, 5s. doz.; lever honey-tins, unused, 7lbs. 6s., 14lbs. 8s., 28lbs. 10s., 56lbs. 17s. dozen; excluder zincs, 1s. —X. Y. Z., BEE JOURNAL OFFICE, 23, Bedford-street, W.C.

SALE, strong stock bees, 25s.; 3-frame nuclei, 15s.; swarm, 12s. 6d., guaranteed healthy, cash. — CHEASLEY, Lashbrook, Henley-on-Thames. v 100

A FEW surplus pure imported Italian queens, fertile, guaranteed delivery.—No. 3 Apiary, Burton Latimer, Northants. v 9

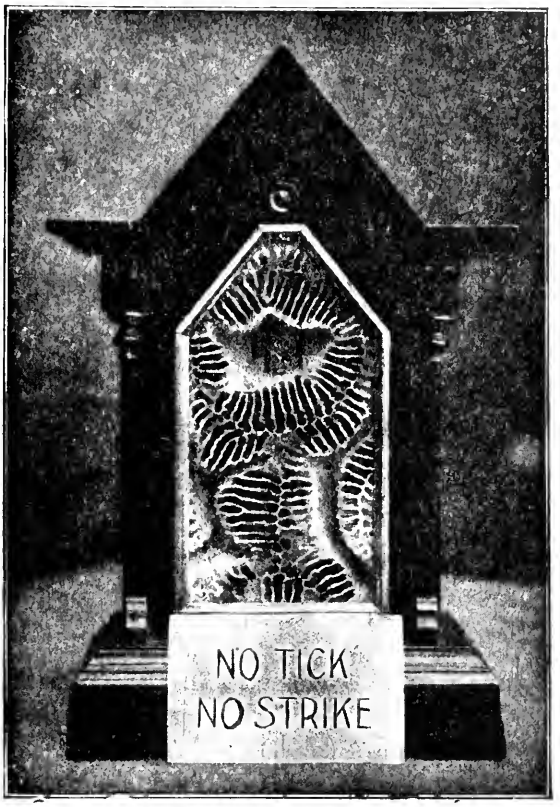
SALE, two good Nuclei, 1915 Black Queens, four frames each, free from all disease, 15s. each; also 2 good 1915 Black Queens, 5s. each.—NEWTON, The Hawes, The Green, Millom, Cumberland. v 6

COWAN geared extractor, 8 frames, automatic reversing, very good condition; offers requested in cash or poultry.—LEA, Upper Bockhampton, Dorchester. v 5

4-FRAME NUCLEI for sale, 16s.; plenty of brood. — W. GREEN, Basildon-road, Laindon. v 8

PHOTOGRAPH of Comb in clock-case from which 7 lbs. of Honey was extracted. Seventy pounds were abstracted from the hive also. These Bees were badly affected by "Isle of Wight" Disease and treated by M. C. Pay of Croydon, and cured by IZAL washing, spraying and Izalized food. He had the hive given to him to be destroyed, May 24th, 1912, on which day he began his treatment.

"In IZAL they had placed in their hands a worthy and formidable weapon for battling against the bacillus."—*Sir James Crichton-Browne, F.R.S.*



IZAL is supplied by Royal Warrant to H.M. The King.

2 Teaspoonfuls Izal Fluid to 1 gallon of water for washing and spraying New Queen Bee inserted on June 12th. 1912.

In September 77 lbs. Honey taken from them. At present, June, 1915 descendants of the original diseased bees are quite healthy.

IZAL

is a Reliable Remedy against Foul Brood.

Sold Everywhere in Bottles, **6d.** & **1/-** each.

Ask for full details of IZAL treatment sent post free by

Newton, Chambers & Co., Ltd., Thorncliffe, nr. Sheffield.

PETROLEUM FOR "ISLE OF WIGHT" DISEASE.

We have received the following from one of our readers. Perhaps some bee-keeper may like to treat diseased bees with petroleum. We shall be pleased to hear and report results. "Being in conversation with the medical officer for this district on the subject of bacteria and bacterial complaints, I happened to point out that the disease which has practically cleared our and other counties of bees is somewhat similar to cholera. He told me that the best thing in the world for killing the cholera microbe is petroleum. What he advised me to do was to put a tablespoonful of pure petroleum in a pound of syrup, and either spray or feed the bees with it, to get them to take it internally. He pointed out that petroleum is not only a germicide of great merit, it is also a laxative."

BOYS AND BEES.

Some idea of the sufferings of Sanderstead bees was given in the Croydon County Police Court, when Hy. Adams, of Tilford, Heathhurst Road, was summoned for assaulting a small boy named Richard Kenneth Townley, of Mayfield Road.

Complainant's father said that on June 18th, on getting home, he found his boy's face was red and slightly swollen. He called on defendant, who admitted having struck the boy, saying he had seen him throwing stones at his beehives, and intended putting a stop to it. Defendant refused to apologise; hence the proceedings.

Young Townley denied that he had ever thrown at the beehives. He saw a little rabbit, and picking up a tiny stone threw it just in front of it.

Chief-Inspector Lovic said boys had done no end of damage to the defendant's property. The Special Constabulary were doing their best to protect it.

Defendant complained of the war declared upon his bees by gangs of boys. In midwinter they had tipped over the hives and thrown the covers into the fields. Some valuable stocks of bees had thus been destroyed through exposure to rain and snow. The boys went about with catapults, slings and air-guns. One had perforated hives with revolver bullets, and had smashed the shed windows. Witness had seen the fathers, but could get no help. They only said "Boys will be boys," and the trouble went on. On Sunday witness found the bees in one hive in great commotion after one of these bombardments. He watched, and saw complainant and other boys throw stones, so he smacked several of them on the face with his open hand.

The Bench offered the defendant their great sympathy, and fined him one shilling.

ALTOFTS TERRITORIAL'S AMUSING CAPTURE OF A SWARM.

The following is from a letter sent by Signaller J. Stringer, writing from "somewhere in France," to his mother, and which he thought would interest our readers. Since September his parents have given about 1 cwt. of honey to the soldier lads and to hospitals; one of the former—a friend—says he can always march on it when they are out.

"I had a bit of sport the other day. We were just having tea, about 4 o'clock, when one of our lads came running in, 'Come and look here; what a lot of wasps,' he said, so I went out, and it was some bees swarming on a tree next to our billet. They were a grand lot, and they clustered under a branch about 10ft. from the floor. I knew a 'Frenchie' who kept bees, but I could neither make head or tail of him, so I left him and started making preparations for taking them. The only thing I had was a box, so I made it about 18ins. square, and in the top I cut a square hole about 3ins. square for feeding; an entrance hole was also made, and then I put a stick inside, crossways, and *then* the fun started. Of course I had plenty of spectators. I piled a lot of boxes up to get to the bees, and was just ready for taking them when out came 'Monsieur' from the house shouting and waving his arms, spitting out his French lingo like bullets out of a machine gun. When we got him quietened down a bit we found out that he did not want me to take the bees; he wanted them, but he was going to leave them in the tree. He sat there on guard over them until about 8 o'clock, like the dog in the manger. Nowhere to put them himself, and he would not let me have them. We spotted him walking away down to an '*estaminet*' for a drink, so we took advantage of it. I got two poles about 6ft. long, and nailed one on to the box side. Young King (from Normanton) wanted to help me, so he held the stick with the box fastened to it underneath them, while I shook them in with the other, which came off a success. I got the box into position and got them all in, and then gave them some of that honey which I brought from home when on leave. We had them there two days when a sudden order came to move for the trenches, so I had to find someone to take them in. At last I found an old farmer, who was very

pleased at the idea, so we managed to get them into his garden. Before we left they had quite settled down, and had started to build comb from the top of the box. I was quite pleased with the job all the way through, and that is the first swarm I have seen all the 15 months I have been out here; and just as we were marching away another lot swarmed, so, of course, we had to leave them. You should have seen the lads, they would not leave them. They would sit round the box all day watching them work and asking questions, but the main thing they wanted to know was, 'When shall we be able to get some honey from them, Jimmy?'"—Pte., now Signaller, J. STRINGER, "somewhere in France."

AN OUT-APIARY IN 1916.
HOPES AND HAPPENINGS.

HOPES.

I would have some hives at a holiday cottage and would produce honey since I could not keep pigs and fowls.

Bees arrived—gorgeous day—plum trees in blossom. I should be extracting in a fortnight. What should I do with the honey? Buy a ripener, at least, to put it in.

I had one hive of Dutch bees which I knew were excessive swarmers. I would adopt the Demaree plan described in the JOURNAL.

I would prevent swarming in the other hives by going through them once a fortnight and cutting out queen cells, beginning next week-end.

Pears out in blossom—bees booming—clap on supers.

Now I should certainly be able to extract. What a good thing that I had that ripener to put it in!

I had an engagement the week-end after Whitsuntide, but if at Whitsuntide I thoroughly overhauled the hives they would be all right for a fortnight.

Very busy for eight or nine days, but as the weather in town was cold and grey I hoped that my bees would not swarm.

None for the rest of 1916.

HAPPENINGS.

Found both hives and bees very expensive, and began to wonder if I should make much profit.

Found difficulty in getting a ripener or any metal goods. Wrote urging instant delivery. That ripener came at last, but, sad to say, it is still packed up as it came, and it is now the end of June!

This Dutch hive was the first to swarm, and later threw off a cast, and may be still throwing them off for all I know!

Next week-end cold and wet; could not touch the hives.

Some honey stored and even sealed.

Weather turned cold and wet. All honey stored from fruit blossom taken down below. Supers deserted!

Whit Saturday, thunderstorms; Whit Monday and Tuesday, pouring with rain. Could not touch the hives.

News sent by neighbours:—
Thursday of Whit-week: 1 swarm.
Friday of Whit-week: 2 swarms.
Sunday: 1 swarm settled on another hive and there was a terrible battle, which ended in the garden being strewn with dead and dying bees.
Wednesday: 1 swarm.

We will wait and see.

I. H. J.

SWARMING TROUBLES.

Do bees occasionally take leave of their senses? I ask in all seriousness, as the extraordinary behaviour of an Italian stock of mine makes me wonder if these usually wonderfully sane little creatures do have mental lapses!

As there is no heather just near here, I obtained the permission of a friend of mine to stand two hives in his garden, which is situated within a couple of minutes of the most "heathery" cliffs in the island, and on the land side, surrounded by fields, now white with clover. One of the hives chosen to go was the Italian lot—they are really yellow hybrids—which was a magnificent colony, packed with bees and brood and which had not swarmed this year. Before moving them, on July 2nd, I looked carefully through the hive, and found, to my disgust, that they *were* meaning to swarm, as there were four sealed queen-cells in the hive. I took out the queen and two of the queen cells, thinking they would not attempt to swarm with a young newly-hatched queen. The next day they were safely transported to their new quarters.

On the 8th I went to see if either queen

cell was hatched. It was a sunny day, with a boisterous high wind, and the bees were very nasty. I am a nervous bee-keeper, chiefly, I think, because a sting poisons me dreadfully, and I do not seem to get innoculated; so I contented myself with taking out the comb with the queen cells (which were at the top, and side by side) and satisfying myself that neither had hatched out. I then closed up the hive, little dreaming of the trouble that lurked in its depths!

On the 12th the bees' host telephoned that the yellow lot had swarmed. Hardly able to credit it I hurried to the spot, only to find it was too true. The swarm was low down in some currant bushes, and easily taken. This done I proceeded to look through the hive in order to catch the other young queen, if hatched, or destroy queen cells, as I intended to put the swarm back. On the third comb I found the two empty cells and a young queen, which I promptly caught and caged. On the next comb I found three sealed queen cells and two open ones, with the little lids still attached, and *another queen*! To cut a long story short, I destroyed nearly a dozen ripe queen cells—none of which had even been started, so far as I could see, on July 2nd and *four more young queens*, making six in all! Then I hived the swarm, thinking as I shook the bees out, "Well, there will only be one queen with *this* lot, as they were all in one lump." I saw one queen run into the hive, and two more making for the entrance! These I promptly killed. So that was *nine* queens, and nearly a dozen queen-cells! Not the least extraordinary part of the whole thing was the weather the bees chose for their escapade—a grey, windy day, with a little pale fitful sunshine and heavy low clouds, which dissolved into thick drizzling rain before the last of the bees had run in from the swarm.

I suspect bad bee-keeping was at the bottom of all this trouble, and should be very glad to know *what* I did wrong. When one queen was hatched out, why did not the bees destroy the other queen cells? How did they manage to build all those queen cells and get all those queens hatched out between July 2nd and 12th? Because on the 2nd I am sure there were only the two I left at the top of a comb, and no sign of the others.

There was plenty of room in the hive for the queen to lay, and only a partly-filled rack on top. The entrance of the hive was well propped open.

It was curious to notice how all those young queens varied in colour—some were very yellow, and others quite black.

I am afraid I am taking up a great deal of your valuable space, but I thought some of your readers might possibly find these vagaries interesting, and I shall be glad to know the reason of it all.—FARREN LE BRETON, Guernsey.

[Either you overlooked some queen cells that were only just commenced when you cut out the two sealed cells, or the bees at once commenced to rear other queens from larvæ that had hatched out at least three days. You should have looked the combs over again on the 8th, and cut out all queen cells but one. When bees have determined to swarm it is very difficult to prevent them doing so, and they will not allow the queen cells to be destroyed, but preserve them so that a second or even a third swarm may issue. When the old queen has gone it is not an unusual thing for swarms to be accompanied by up to half-a-dozen virgins, nor do they always make a number of separate clusters.—EDS.]

POTTED HPOONGYI.

Burma is essentially the home of the Buddhist, and in spite of its cosmopolitan population, John Burman, follower of Gautama, remains in the majority. Majority does not stand for wealth, and the lazy native has not been the developer of the rich resources of the country, nor is he the tradesman in the cities. He is a loafer pure and simple, with a loafer's love of ease and disregard of dirt; the former encouraged by his religion and his emancipated wife, the latter by the style of dwelling in this land of rain and moisture.

The wife is the business manager; she keeps the stalls, forms the contracts, and carries on whatever trade supports her ornamental husband and ever growing family. Their hovel, hut, or better class house, is always built on stilts, so that the ground floor fulfils its nomenclature literally; the whole is built of wood, or for the poorer class of grass mats. The floors are rough, and through them is thrust all refuse, which falls on the ground floor where live goats, fowls, dogs, cats, and any other domestic pet. The whole place is filthy and verminous, and yet outside their home they are the daintiest, nattiest, best-groomed looking women in the world. Real national religion, or rather philosophy, for Buddhism is more spiritual logic than a religion, demands that every male of every class shall spend at least one Lent (July to October) in a monastery, and live the life of a novice—he shall don the yellow robe, beg his daily food from the charitable, carry no money, and look on no woman.

Most self-respecting Burmans spend at least three months in this manner, with no services to attend, no work to do, a

plentiful supply of food and no financial cares; it is indeed an attractive existence to the pleasure-living idle aborigines, and large numbers having accomplished their novitiate adopt the life of a monk altogether, ten years later becoming full priests or hpoongyis, who are held in great esteem, awe, and reverence, for have they not taken the path chosen by Buddha which leads directly to Neilsban!

The word attractive has been used to describe the life, but it would hardly be a correct adjective were the followers of the great Gautama to carry out his doctrines in the spirit and not only in the letter of his law. Constant and increasing meditation and concentration on the virtues of life, leading eventually to self hypnotism and trance ending in death, were the only means of reaching Neilsban, that glorious state of lifeless bliss and concentration, or the final stage of the spirit after its many incarnations and phases. Thus the teaching of Buddha, which in the spirt must spell "contempt of all earthly desires, pleasures, and comforts." To those, however, who have not the desire for monastic life, spiritual promotion is by no means denied: they can attain it by many strange ways of "gaining merit," but the strangest of all must surely be that reached by the consumption of potted hpoongyi, or honey containing extract of priest.

When one of these reverend, or supposed-to-be-reverend, gentlemen dies it is a time of rejoicing for all the Buddhist community; he has "passed over," and by his pure contemplative life on earth has attained a higher plane, probably indeed so high that further material incarnations will be unnecessary: certainly they will be fewer, for has he not shown and proved his contempt for all earthly fleshpots! (N.B.—This contempt is rarely manifest in the sleek, sensual-looking, modern hpoongyi, who carries out, perhaps, the letter but certainly not the spirit of that pure doctrine set forth by Buddha. This modern product roams the shops and bazaars, attends band nights in the parks, races and all other meetings, rides in hired carriages and trains, stares offensively at ladies, and has his attendant child or children to carry his bag and money, so that the letter of the law may not be broken.) The priest is not buried in the earth like a layman, the late material covering of his spirit must not be placed in such an undignified position that anyone might walk over it: the usual decomposition must not be allowed to take place, nor must there be any unseemly hurry to dispose of it. A whole year must elapse before the final funeral rites are performed, and cremation takes place with great ceremony and rejoicing. The body is therefore embalmed. Spices are rubbed over it, and it is wrapped in a sacred robe and placed in a tank of honey. Not the honey one pictures naturally after a course of "B.B.J." reading, not clear clover honey, for example, extracted from W.B.C. frames; it is dirty, dark stuff, containing bits of comb, brood, and any filth that happens to fall into it when roughly bruised from the wild bees' combs found in the jungle (there is no apiculture seen in Burma, to the writer's knowledge). Embalming in honey is, we know, an ancient custom, used by the Egyptians B.C., for it extracts all the water from the body, leaving it dry and hard as a log of teak wood; but we do not read that the Egyptians of old subsequently tapped, bottled, and sold the honey in the markets for public consumption, by which the faithful might attain merit. It is a revolting idea, and one that seems incredible, but it is actually true, and is the custom of the present day in spite of all the sanitary and hygienic laws established by the British. As I have had a quart bottle of the stuff offered to me by a Burman pedlar, I can tell you it is awful looking fermented stuff, about the consistency of water!

How is there no epidemic of typhoid among them? one asks, and there is no other answer but that perhaps the Burman being born, brought up, and living in the midst of dirt and filth, is too thoroughly inoculated to mind what he perhaps would call "clean-potted hpoongyi."—MARIE BUCKWELL, Rangoon.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

AN AMATEUR'S TREATMENT OF "ISLE OF WIGHT" DISEASE.

[9293] I am an amateur at bee-keeping, my experience dating only from last summer. I started with three stocks and a swarm, and have now seven lots, all going strong. My reason for writing is that my entire stock of bees, numbering four hives in the early days of spring, was rapidly dying off owing to the prevalence of the "Isle of Wight" disease.

Stock No. 1 was so badly affected that I waited only for a fine day to open it up

and destroy it. The ground was covered with crawling bees, and whilst the bees in other hives were busy carrying in pollen, the wretched bees in No. 1 hive contented themselves with mass demonstrations on the flight-board, doing nothing but seemingly examining the paint and jostling one another over the edge. Those who fell off the board joined the crawlers, and here and there little groups would assemble in an endeavour apparently to keep themselves warm and exchange condolences.

Some of the more nimble would climb up blades of grass, only to drop off again. Instead of destroying the remnant (and it was a small remnant) I made the experiment of spraying them on the combs with a dilution of peroxide of hydrogen. I used the preparation Dioxogen, which is procurable at any chemist's. It has the merit of being tasteless, odourless, and colourless.

The results were eminently satisfactory. Within a few days I was rejoiced to find that there were no more crawling bees, and it was not long before the bees of that hive were busy at the healthy occupation of pollen gathering. To-day it is one of the strongest of my stocks.

My other stocks became infected one after another, and I treated them all in the same way, thoroughly spraying bees, queen brood, and combs with a slightly warmed dilution of the Dioxogen. To make assurance doubly sure, I sprinkled the ground all around the hives with diluted Izal, and washed the floorboards and brood box with the same excellent preparation.

I have now no trace of disease, though for miles around bee-keepers have lost all their stocks. I should be glad to hear if any other bee-keepers have experimented with Dioxogen.

I have used it also in feeding syrup. As a germicide I would not be without Dioxogen.

I used it first upon the bees because I happened to have it in the house, together with a sprayer or atomiser. I had noticed in spraying my throat with it during a bad bout of influenza how completely it destroyed harmful bacteria. Dioxogen bubbles and foams when it is brought in contact with infectious matter, so that its action is visible. I find it excellent for bee stings also. And once having burnt my finger nails and the skin of my hands with a caustic soda and potash solution for spraying fruit trees, an application of Dioxogen dissipated the discolourment in a few seconds—which I considered a wonderful discovery, for in the previous year (before I knew of Dioxogen) I had the same experience of hands and nails discoloured black and brown and yellow with tree-wash, and it took a couple of weeks to get rid of the disfigurement, and then only by frequent use of pumice stone and scraping nails with a penknife and file.

As others who take your journal may occasionally get their hands discoloured, I give this tip as one worth knowing. But my main purpose in writing is that others may be induced to try spraying their bees as I did. If others have the success that I have had, it will be a satisfaction to me to know that my own success was no accident, and I shall be amply rewarded if my experiments in any way contribute to the well being of the bees. My interest in bees is great, and I devour all literature that helps to my knowledge of them.—A. H. Hollis (Rev.).

THE NYASA BEE.

[9294] Motorists, like myself, are very fond of the excellent preparation called "Flash Cleaner," made in America and sold by Brown Brothers, for cleaning their hands from dirt, grease, etc. They must never throw away the washing water thus used where bees can get at it. They will drink it ravenously, and a few minutes afterwards kill everything they can reach. And there will be angry bees about the hives for several days after the repast of "Flash Cleaner." Never have I seen such fury in bees. Yesterday this happened to me for the fourth time, always due to disobedience of the native servant, and causing great loss of life in fowls, in fact all fowls which I cannot save from them by taking them into the house.

For several months I had a solitary bee hive on the verandah of this house, near a brick pillar, and about a foot behind the trellis work. There are several such pillars, 12 ft. apart, supporting the roof and with trellis work with meshes of about 4 ins. between them.

As I had expected, always a number of bees leaving the hive cannon full speed against the trellis work. But what I had not expected was that, on returning from the fields, about one-tenth of the bees did not return right to the hive, but first flew to one of the other pillars 12 or 24 feet away from it, and then gradually found the hive. No doubt the trellis work of inch bamboo is better illuminated than the hive standing in the shade behind it. All the same I see it quite clearly and without difficulty from a distance outside.

From this observation we may draw these conclusions:—

(1). That the orientation of our bees depends a good deal more on sight than is generally assumed.

(2). That their sight is less adaptable to the contrast of light and shade than ours, or at least less quickly adaptable than ours.

(3). That bees not having a contract-

ible pupilla, the adaptability of their eyes to darkness or light, as far as it goes, may be due to nervous action in their brains, or to what else?

(4). That the curious fact that in most apiaries hives in certain positions are more populous and give more honey than the rest may be attributable to bees of other hives flying there and depositing their honey in particular hives in preference to others, possibly also owing to peculiarities in the working of their senses of sight and observation.

I hope this will bring forth reports on similar observations and the observers' comment thereon.

Since first writing to you how I make my hives out of paraffin cases at a nominal cost, I have considerably improved them. The omission of plinths is an improvement where the work done by native carpenters cannot be expected to be accurate enough. Instead of cutting the entrance in the brood box, which made an ugly hole and barred its use as a doubling box, I made the floor board of two layers of three-eighths deal from the same cases, leaving the entrance in the upper layer; and to kill two birds with one stone, I do not let the entrance reach further inside than five-sixteenths of an inch beyond the inner side of the front wall. A Death's Head moth will now have to break its back to get into the hives. This moth causes more nuisance than is often thought. The theft of honey may be negligible, but not the ruthless disturbance of the brood nest, and consequent bad temper of the bees the next day, for which often the bees may get the blame.

That is not the only case in which the bees get blamed undeservedly in tropical countries—and perhaps in others. Often, for instance, they are annoyed by ants, the small kinds being the worst here. They worry the bees, presumably to get honey and brood, and, naturally, the bees are cross. I found this out a couple of months ago, and after clearing out the ants put the hive feet in oil. But soon I found that a small colony had formed under the quilt, very small, but troublesome. Now I find another hive still cross, and by the noise they make I fear that ants are the worry, though I cannot see any. I will transfer them into another hive and sulphur the present one, presuming that the ants are in the air spaces between the walls.

I was, and am, delighted with the amiable skit, in "Cappings of Comb," on page 4 of January 6th last, on those who blame bees for what is really error in management and housing. But I wonder if the irony has not been too deep, and if many will not fail to see it. After all, it is natural that we should look upon everything from our own side and from that of our custom, and to few is it given to see things as others may see them, and they rarely get thanks for saying so. That is perhaps the reason why we never read any criticism, nor even comment, on "the standard hive," "the standard frame," on their origin (I say "their," because there are so many, each nation having at least one), their benefits, and (let me whisper it in your ear) their drawbacks, individually and generally. Another difficulty in the way of improvements in this direction is the fact that the people most qualified to make them have all been brought up to look upon the standard as sacred; they have such experience in the working with them, that even with a better system they would not find it easy to get a better result, and many of them will have come to blame anything but the standard for failures. Perhaps lesser lights may do some good by raising the point.

That one so rarely reads tips "how to make one's own appliances" is probably due to the fact that few of your readers reside outside of the United Kingdom, where these things can be got ready-made, cheaply and quickly. "Outsiders," like my humble self, very often wish to make some appliance or other, if they but knew how. More so now since the mails are so irregular. The other day I got an 8 ft. roll of excluder zinc from Durban, but was charged 25s. cost and 7s. postage, and there will be another 3s. import duty, bringing the 8 ft. to 35s. A Rymer honey board is catalogued at 1s. 6d. Who would think then of making one himself? Well, presumably all those who have to pay 4s. postage and 1s. duty on it, after waiting six months for its arrival. Would you tell me, dear Editor, if this honey board will keep the queen from going into the supers? Does it not impede ventilation? In a catalogue I see "Wood Excluders (Marshall's)" for 1s. 3d. The freight and delay would make it prohibitive. Please do tell how I could make one myself. I am sure, under the circumstances, the manufacturer will not mind. Then there are metal ends catalogued of one and nine-twentieth and one seven-eighth inch, but none of one and three-tenth inches, as I want them in order to suit the size of *Apis Adansonii* and to keep down drone breeding. How could one make these or substitute something else?

In a most interesting and useful catalogue I read, "Hives should never be placed close to a wall or under trees." Why should they not be under trees?—L. W. J. Deuss, Blantyre, Nyasaland.

[The Rymer honey board will not entirely prevent the queen from entering supers, but it will hinder her to a great

extent. It will impede ventilation very little.

We are afraid you will be unable to cut the apertures in a wood excluder accurately enough to prevent the queen getting through. The most likely method will be to bore pairs of holes of the right diameter in a line, and then with a fret saw or a chisel cut away the wood between each pair; use 3-ply fretwood.

You could overcome the difficulty of shoulders for frames by tacking pieces of wood on each side of top bar above the frame ends. These should be about 1 inch long, as thick as the frame top bar, and wide enough to give the desired spacing.

Hives should not be under trees in this country because they would be too much in the shade, and they would be too damp from the rain or other moisture dripping on to them.—EDS.]

Notices to Correspondents

Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. All questions must be accompanied by the sender's name and address, not necessarily for publication, but as a guarantee of good faith. There is no fee for answering questions.

J. S. ANDREW (Devon).—*Extracting Combs from Skep.*—The extractor will take the honey out. The difficulty is to hold the combs to uncap them, and to turn them round to extract both sides.

—— *Uniting Driven Bees.*—The number of lots to be joined together will depend on their strength. It almost invariably needs the bees from at least two skeps to make a decent colony, and at times we have found four lots only cover ten standard combs. You may put them on twenty combs, but if they are strong enough to do so, it will be better to make two stocks of them. They should be fed until each lot has 30lbs. of syrup stored in the combs. A standard comb will hold about 5lbs. of syrup or honey.

—— *Syrup for Autumn Feeding.*—White cane sugar, 10lbs.; water, 5 pints; vinegar, 1oz.; salt, ½oz. Boil a few minutes. If you use Izal for medicating, add half teaspoonful.

W. PARSONS (Lincoln).—The queen was a virgin. We are afraid there is no chance for legislation until the war is over. There are not so many objectors now, some of them have had the same thing to contend with that you complain about, and were "hoist with their own petard."

M. W. Ross (Alness).—*Symptoms of "Isle of Wight" Disease.*—See reply to E. T. English in "B. B. J." for last week.

F. M. HEWENS (Walsall).—The queen was a native. Probably the bees had attempted to swarm, and in doing so the queen was lost.

"LEICESTERSHIRE" (Hinckley).—Sorry we cannot say. Did you examine the cage before placing on the hive, and make certain the candy was in a position for the bees to get to it. Possibly the candy had become too hard.

N. BUSH (Hill Park).—If the colony is at all strong do not confine them. Place a handful of dried grass loosely in front of the hive entrance so that the bees have to worm their way through it when leaving the hive.

That is the tendency of the Dutch bees, and also in a lesser degree of the Italians. We still prefer natives.

INQUIRER (Ipswich).—From the sketches given the objects are probably hairs which have been detached from the body of the bee during the pressing of the abdomen. On page 16 of "The Honey Bee," by T. W. Cowan, are shown various hairs which cover every part of the epidermis. They are easily broken, and frequently occur in juices when pressed from the body of the bee. They are also often found in honey.

Honey Sample.

E. M. (Worcs.).—The honey is mainly from clover, with a little sycamore. It is worth showing locally, but needs straining. Flavour and colour both good; density, fair. This is its weak point. It would be much improved if you could keep it uncovered for a week or more in a warm place free from dust.

Suspected Disease.

T. BROWN (Yorks).—The bees have died from "Isle of Wight" disease.

S. S. (Leicestershire).—It is "Isle of Wight" disease. The best thing is to destroy them or use the Izal treatment.

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices (not exceeding 7 lines) in this column, 10 lines charged 3s. 6d., up to 15 lines 5s., which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

Cannock Horticultural Show, Monday and Tuesday, August 7th and 8th. Eight Classes for Honey, &c., open to all. **Good prizes offered.** Jno. Bird, Secretary, 62, Allport-road, **Cannock.** Entries close August 1st.

Special Prepaid Advertisements

Two Words One Penny, minimum Sixpence.

Will advertisers please read these Rules carefully in order to save trouble, as they will in future be strictly adhered to.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not permissible at above rate, but will be inserted at* 1d. *per word as* **"Business"** *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of* 3s. *per* ¼*in., or* 5s. *per inch.*

PRIVATE ADVERTISEMENTS are only intended for readers having **Surplus Stock** *to dispose of.* **Driven bees, Nuclei,** *and* **Queens that are reared or imported for sale,** *are Trade Advertisements, and can only be accepted under trade terms.*

Advertisements must reach us NOT LATER than FIRST POST on TUESDAY MORNING for insertion in the "Journal" the same week.

Orders for three or more consecutive insertions in "The Bee Journal" entitle advertisers to one insertion in "The Bee-Keepers' Record" free of charge.

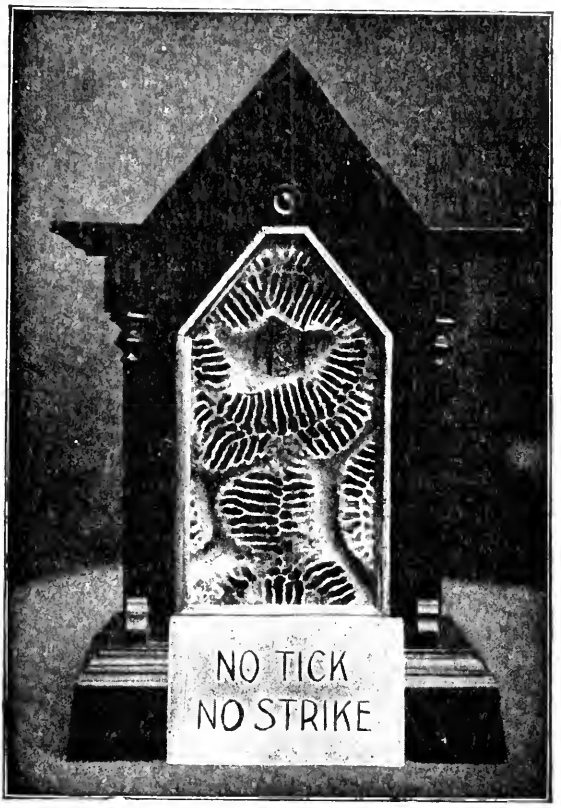
PRIVATE ADVERTISEMENTS.

WILL any bee-keeper living in or near St. Albans accommodate a young unmarried couple with board and lodging for August Bank Holiday week?—Please send particulars and fee to F. NICHOLLS, 498, Gladstone-street, Peterborough, Northants.

TO clear. Porter escapes, slightly soiled, 1s.; feeding-bottles, with stages, 1s. each; section racks, complete, 3s 9d.; drawn out shallow combs, 5s. doz.; lever honey-tins, unused, 7lbs. 6s., 14lbs. 8s., 28lbs. 10s., 56lbs. 17s. dozen; excluder zincs, 1s. —X. Y. Z., BEE JOURNAL OFFICE, 23, Bedford-street, W.C.

PHOTOGRAPH of Comb in clock-case from which 7 lbs. of Honey was extracted. Seventy pounds were abstracted from the hive also. These Bees were badly affected by "Isle of Wight" Disease and treated by M. C. Pay of Croydon, and cured by IZAL washing, spraying and Izalized food. He had the hive given to him to be destroyed, May 24th, 1912, on which day he began his treatment.

"In IZAL they had placed in their hands a worthy and formidable weapon for battling against the bacillus."—*Sir James Crichton-Browne, F.R.S.*



By Appointment.

2 Teaspoonfuls Izal Fluid to 1 gallon of water for washing and spraying New Queen Bee inserted on June 12th, 1912.

In September 77 lbs. Honey taken from them. At present, June, 1915, descendants of the original diseased bees are quite healthy.

IZAL

is a Reliable Remedy against Foul Brood.

Sold Everywhere in Bottles, **6d.** & **1/-** each.

Ask for full details of IZAL treatment sent post free by

Newton, Chambers & Co., Ltd., Thorncliffe, nr. Sheffield.

A ROLL OF HONOUR.

Although bee-keeping is considered a minor pursuit, we venture to say that it has provided more fighting men than the usual average of any industry. To place on record the part the members of our craft have played in the present war we propose to make a "Roll of Honour," and shall be pleased if our readers will forward us the NAMES and ADDRESSES, together with the REGIMENT and RANK, of any bee-keeper serving his King and Country at home or abroad; also if killed or wounded.

We print a further list of names to those sent in, and shall be pleased to have other names as soon as possible.

2nd A.M. W. Hopkinson, Wellow, Notts.—R. F. C.

Pte. H. Mace, The Cottage, Stow Longa, Huntingdon—13th Royal West Surrey Regiment, "The Queen's."

DIOXOGEN AND "ISLE OF WIGHT" DISEASE.

In my letter of last week *re* the treatment of "Isle of Wight" disease, I omitted to give the proportion of Dioxogen as used successfully by me. I do so now in compliance with the Editors' request.

For spraying bees and combs I used a mixture of 1 part Dioxogen to 6 parts warm water. For syrup, the proportions were 1 teaspoonful of Dioxogen to each pound of sugar, the Dioxogen being well stirred in when the syrup (after boiling) had fallen to blood heat. As Dioxogen is non-poisonous, a slight excess of it would not, I imagine, be harmful.

The external action of Dioxogen, when sprayed upon bees and combs, is that it destroys the bacilli of disease on the bees and combs, and stops its further progress. The bees by spraying are covered with the liquid in the form of a fine mist or spray. This they at once proceed to get rid of. They brush themselves over with their legs, and so carry the germicide to their under parts. Equally important is the internal action of the Dioxogen. The bees lick off some of the mixture with their tongues, and thus convey it to their stomachs. In this way the digestive tracts are reached, and all internal infectious germs destroyed. The thick mucus in the air-passages of the bee is broken up and detached and the air-passages cleared. It is apparently this blocking up of the air-passages, and the congestion of the stomach of the bee that prevents affected bees from flying, and makes them crawl on the ground. One has only to watch a diseased bee to see that this is so. The bee will stand on the flight-board or on the ground, and a laboured vermicular or peristaltic motion of the lower part of the body is clearly discernible. The bee is either panting for breath or suffering from a painful obstruction of the bowels, which it tries to get rid of, but cannot.

Might I add for the guidance of those who might wish to try Dioxogen spraying upon their bees, that the sprayer or atomiser to be used should be one that is capable of throwing a spray as fine as mist or steam. An amateur reading of spraying might imagine that a garden syringe would be a serviceable article. The atomiser used by me was one with an india-rubber ball, and tube at the end, and the metal spraying tube projecting from the glass receptacle is about 6ins. long, having a flexible nozzle, which allows one to spray in any direction without difficulty.

Empty cells should be sprayed as well as those containing brood, and care should be taken not to expose the combs too long, or chill the brood.

I found in each case that one spraying was sufficient to effect a cure, and, as I said in my previous communication, I take the precaution of sweetening the hives throughout by washing them with Izal, and also sprinkling the ground around the hives with the same preparation.—(Rev.) A. H. HOLLIS.

BEES AND HEART MUSCLES.

People are saying again that bees are dying of the "Isle of Wight" disease because they are fed with beet sugar, which lacks "some vital principle" contained in cane sugar. Doctors also tell us that the heart muscles get "some vital principle" out of cane sugar that the other lacks. We do know that cane sugar has exclusive possession of silicon fluoride, which forms the enamel of teeth. Is this then what the bees die for the lack of?—From the *Evening Standard and St. James's Gazette.*

HELPFUL HINTS FOR NOVICES.

By W. Herrod-Hempsall.

QUEEN-REARING AND INTRODUCTION.

(*Continued from page 220.*)

The American spiral cage is a very useful one, the bottom and top are closed by means of small square pieces of perforated zinc. The queen and about four attendants are run in at the top, which is then closed with the perforated zinc. The cage is transfixed on to the comb by pushing in about 1½ inches of straight wire which stands out at right angles from the cage after making the last turn of the spiral arrangement. Care must be taken to fix it on food, and crush it in a little so that the inmates can feed (Fig. 90). The best cage of all, and the one I prefer for my own use, is the travelling introduction cage, No. 12, Fig. 84. With this if a queen is purchased there is no need for the beekeeper to handle her at all. The cage and methods of using are fully illustrated in Fig. 91. It is made from a piece of wood about 5ins. long, 1in. wide, and ½in. thick, No. 1. Two large holes

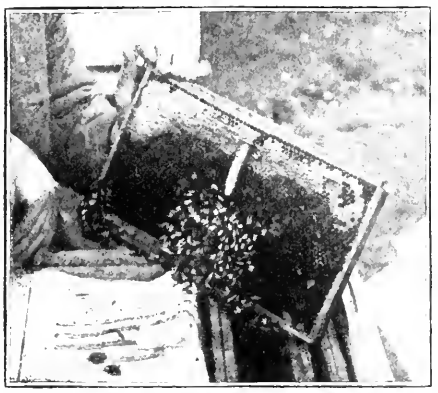


Fig. 90.

and one small one are bored in it, No. 2. To give ventilation a groove, which just penetrates the two large holes, is cut at each side, No. 3. A connecting passage between all three is cut, No. 4. A thin bottom, as No. 5, is then nailed on. No. 6, being a bottom view, and No. 7 a top view. The small hole is filled with candy, No. 8, made by mixing honey, which has been sterilised by boiling, castor sugar and a little wheaten flour to a stiff paste that can be kneaded in the hands; or, better still, a supply of the usual winter candy should be kept on hand to use instead, and so avoid all risk of infected honey. To prevent moisture escaping from the food and soaking into the wood the food hole should be previously painted with hot beeswax. A piece of perforated zinc is cut to fit about ⅛in. down each side and at one end, No. 9, with a hole to come in alignment with the feed hole, No. 10. For travelling, this is covered with a piece of paper, No. 11. A loose lid, No. 12, completes the cage, which is wrapped in paper left open at the ends so that air can pass down the grooves. An addressed label is then tied on, and also in case this

gets torn off the address should be written on the paper-covering as well. The parcel is then ready for dispatch, No. 13. Upon receipt the first thing is to see that queen and bees are alive by removing the paper covering and loose lid. Remove the paper covering the food hole, and, if necessary, replenish the food supply in the small hole, No. 14. When sending out queens instructions as follows should be enclosed :—

INSTRUCTIONS FOR THE INTRODUCTION OF QUEEN BEES.

Before giving the Queen to the Colony **be sure** it is without a Queen either fertile or Virgin.

Colonies should be queenless not less than 24 hours, nor more than 5 days, if longer 1 or 2 combs with a fair quantity of unsealed brood should be given before introducing.

To introduce Virgins the Colony should be Queenless not less than 3 days. See that all Queen cells that may have been started are destroyed.

To introduce with this Cage remove the wooden lid, also the piece of paper covering the food, see that there is a plentiful supply of candy in the food hole, note the condition of Queen, now place the perforated zinc so that all three holes are covered, put the cage on top of the frames, zinc downwards, taking care that the holes come between the top bars, allow the cage to remain thus for twelve hours, then slide the wooden portion forward to the turned up end of zinc, so that the food comes over the large hole in zinc, the bees in the hive will eat away the food and so liberate the Queen in from 1 to 2 days.

Do not disturb the stock for at least 4 days after the Queen has been liberated.

If the weather is cold set the cage right over where the cluster of bees is, should the Queen and her attendants arrive feeble, or smeared with food, release her at once among the bees ; if after cleaning her they ball her, return her to the cage alone, or with just hatched workers, not old bees.

If she arrives dead return her at once in cage and she will be replaced. If your bees are or have been robbing you may may not succeed in introducing.

N.B.—Queens just arrived by Post usually look small and dark ; after laying a few days they will improve.

The perforated zinc is now pushed forward, so that all three holes are covered. It is then placed over the frames at the feed hole in the quilt, in the position shown at No. 15, which is viewed from the inside of the hive. It will be seen that the holes in the cage come between the top bars, thus allowing the scent from the hive to penetrate and enabling the queen to walk out when the food is consumed. The zinc is allowed to remain as at No. 15 for twelve hours, when the cage is pushed forward as at No. 16, so that the food is exposed to the bees in the hive. This is eaten by them, and the queen is liberated automatically. The advantage of this cage can be readily seen, as no handling of the queen is necessary. After the cage is pushed forward there is no need to touch it for days ; therefore it is an ideal one for the

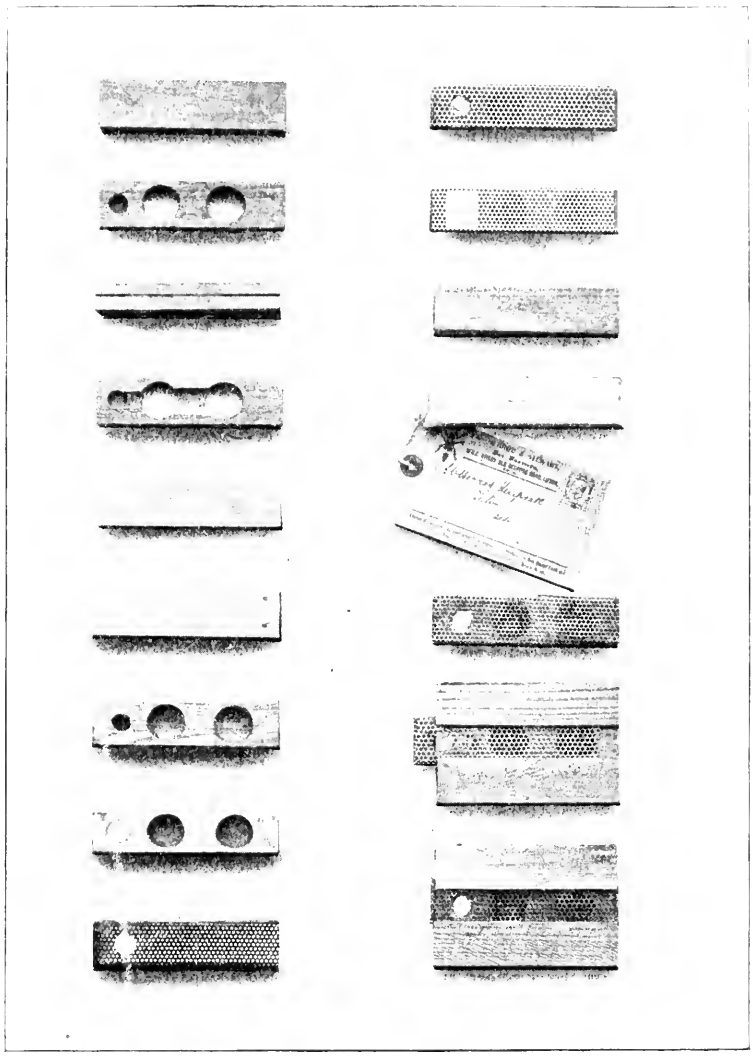


FIG. 91.

busy man or for out-apiaries. In placing the bees and queen in this cage it is advisable to use a slip of glass, and not the perforated zinc, as a temporary cover, or they may be injured.

(To be continued.)

CORK BEE-KEEPERS' ASSOCIATION.

The monthly meeting of the Cork bee-keepers was held on Saturday, July 8th, at 12, Marlboro' Street. Mr. Michael Lynam, vice-president, occupied the chair.

The Secretary read the correspondence, which included letters from the D.A.T.I., from the Irish Agricultural Wholesale Society, Dublin; from a gentleman asking advice in the management of some stocks he had recently acquired, from an English wholesale dealer in honey, both section and extracted, inquiring if the Association could supply large quantities of honey of both kinds.

In the course of the discussion which followed the reading of the correspondence, several members expressed the opinion that owing to the unfavourable condition of the weather in June and July, the great loss

of stocks during last winter, and the weak condition of the surviving colonies on the opening of spring, they could scarcely hope to supply their local customers, and that consequently little honey would be available for export this year. The secretary was instructed to inform the wholesale dealers that unless an immediate improvement in the condition of the weather set in the Association could make no promise to supply wholesale orders this year.

The Chairman next gave an account of the proceedings of the deputation from the Association which recently waited on the Cork County Council, and subsequently on the County Committee of Agriculture, with the object of urging these bodies to grant compensation to bee-keepers for the compulsory destruction of stocks affected with foul brood. He stated that they were fortunate in securing the services of the Rev. Father Power, of the University College, Cork, to act as spokesman. Father Power, in his statement before the Committee of Agriculture, made out a strong case for the granting of compensation, and the chairman had strong hopes that the demand of the bee-keepers for compensation would in a short time be granted. He further stated that the rev. gentleman had had an interview during the past week with the officers of the agricultural branch D.A.T.I., and secured a promise that the matter would be looked into without further delay.

The following resolution was unanimously adopted :—"That we tender our best thanks to the chairman and the other gentlemen : The Rev. Father Power, Messrs. Lucy, C.H.C., and Fielding, F.C.S., who accompanied him on the deputation to the Cork County Council and the County Committee of Agriculture to urge on those bodies the immediate necessity of paying compensation for the destruction of stocks affected with foul brood, and we desire specially to thank the Rev. Father Power for the able manner in which he discharged the duties of spokesman on the occasion."

The other business was unimportant.

CRAYFORD AND DISTRICT BEE-KEEPERS' ASSOCIATION.

The third summer meeting was held on Saturday, July 15th, at Mr. A. C. Paulin's apiary, Brackenhurst, on Dartford Heath, and drew an attendance of 80. Fine weather again favoured the arrangements.

Dr. C. Courteney Lord took the chair, and opened the proceedings with some well-chosen remarks concerning the Association, its rapidly increasing membership and spreading popularity. Referring again to their good fortune in having a beautiful silver cup (which was on view) presented for competition, he appealed to new members, as well as old, to make a big effort to win it at the forthcoming Honey Show to be held on August 26th next.

The feature of the afternoon was the three lecturettes given by prominent members of the Association, each of 20 minutes' duration, with a few minutes between for questions :—

1. "Honey Bees and Their Natural History," Mr. A. Dewey (President).
2. "The Products of the Hive," Mr. G. Bryden.
3. "Hives and Appliances," Mr. W. H. Prior.

Mr. Dewey treated his subject with a view of assisting some of the new members who have recently availed themselves of the re-stocking scheme and received their bees. He traversed the metamorphosis of bees from the egg to the fully-developed insect, and dwelt upon the characteristics and natural history of the occupants of the hive in a very instructive and interesting manner.

Mr. Bryden followed with a chat upon the products of the hive; the methods of obtaining surplus honey in sections and in shallow frames, emphasising the advantages of the latter for greater production, and at the same time explaining the use of the extractor. He also dealt in some detail upon preparing honey for the show-bench, and exhibited two samples which had each won a second prize in their respective classes at the Royal Show at Manchester recently. Wax production was thoroughly explained; in fact, the lecture both from an instructional standpoint and of masterly delivery was a great success. Meanwhile, the Ladies' Committee had been busy preparing the tables on the lawn and tea was called at 5 p.m. Refreshments were served in an excellent style that reflects great credit on their work and organisation.

At 6 p.m., Mr. Prior was called upon to give his lecture on hives and appliances. He illustrated his remarks with an ordinary fixed brood chamber type of hive, a W.B.C. hive, and the necessary appliances required by the average bee-keeper. His lecture was followed with keen interest, and explanations in detail were given in a clear and comprehensive style. At the conclusion, the company was directed to the apiary, where a demonstration was given by Mr. Paulin.

Votes of thanks were proposed to Mr. and Mrs. Paulin for the use of their grounds; to the lecturers, Messrs. Dewey, Bryden and Prior; and to Dr. Lord for presiding, which brought a very successful meeting to a close. A. C. P.

CORRESPONDENCE.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

A PROLIFIC STOCK.

[9295] I thought, perhaps, the following might interest bee-keepers generally :—On or about the middle of May last I purchased a stock of bees from Mr. Hancox (a skep I should state), a few days later they swarmed. I placed the swarm on ten frames, in a box hive, and they built upon them. About a fortnight ago these bees swarmed. I cut out queen cells and returned the swarm to the hive again. I had already put on an old skep for a super, but without a queen excluder under it. Consequently the queen had gone above, and the result was both worker and drone brood, also, I should say, about ten or twelve pounds of honey. Now, only last Saturday the old parent hive (the skep) that swarmed last May threw off another swarm, and, I should say, under the adverse weather conditions that we have experienced lately that the original stock I bought has done exceedingly well. What say, my brother bee-keepers? I might add, Mr. Hancox stated when I bought them that I had got as good a strain of bees as anywhere in England, and I must naturally come to the same conclusion. — W. GALER.

A SIMPLE SYRUP FEEDER.

[9296] I thought this simple hint for making syrup feeders, which I use entirely in my apiary with great success, might be useful to your readers.

First procure an empty honey or treacle tin, with tight-fitting lid, then make about a dozen tiny holes in centre of lid in the form of a cross; fill the tin with syrup, put lid on tightly. Next cut a piece of wood, one inch thick and six inches square, in the centre of this make a circular hole two inches in diameter, put the wood over the feed hole in the quilt and turn the tin upside down over the wood. This makes a very serviceable slow feeder. For rapid feeding, a tin with larger holes is all that is required. When the tin is to be refilled, slide a piece of glass between it and wooden stage to prevent bees escaping.—F. N. COLEBROOK, Jersey.

PRESS CUTTINGS.

STRENGTH OF THE BEE.

Scientists tell us that a bee, weight for weight, is thirty times as strong as a horse. In other words, if a bee were as big as a horse it could do the work of thirty horses. A horse can draw no more than five or six times its weight. Some of the smaller flies are even stronger than the bee. An ordinary house-fly held up by the wings can lift a match-stick with its feet. Weight for weight, this is equivalent to a 150lb. man hanging by his hands and supporting with his feet a beam 14ft. long and 2ft. 6in. square.—From *Tit-Bits*.

TREBIZOND HONEY.

The prominence given in recent days to the name of Trebizond recalls the fact that Azalea pontica flourishes in profusion on the mountain slopes of the district, the plant supplying a poisonous honey.

" Those bees of Trebizond,
Which from the sunniest flowers that glad
With their pure smile the garden round,
Draw venoms forth that drive men mad! "

It is to the deleterious properties of the honey of this region bordering the Black Sea coast that Xenophon refers in his famous account of the " Retreat of the Ten Thousand " in Asia, after the death of Cyrus, when he tells how his soldiers became stupified and delirious, as if intoxicated, after eating of the honey of Trebizond. The bad effects of the honey extracted from the shrub are, however, only temporary. The honey is shunned by the natives, as they know full well its poisonous and narcotic effects. At this time of the year—the season when the Azalea blossoms—the region around Trebizond presents a brilliant appearance.—From the *Gardeners' Chronicle*.

" For anyone to keep a cow for their private supply of milk is a luxury, and there is no necessity for it," said the Chairman of the Chobham Tribunal, and, as a result of this ruling, a maiden lady in the district who has long cherished the ambition of keeping a bee for her private supply of honey has reluctantly decided to abandon the idea.—From *Punch*.

HONEY IMPORTS.

The registered value of honey imported into the United Kingdom during the month of June, 1916, was £35,887. From a return made to the BRITISH BEE JOURNAL by the Statistical Office H.M. Customs.

Notices to Correspondents

Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. All questions must be accompanied by the sender's name and address, not necessarily for publication, but as a guarantee of good faith. There is no fee for answering questions.

C. R. JONES (Dorset).—*Sugar for Candy Making.*—Mauritius sugar will be suitable for this purpose *if it is white.* Do not use a sugar that is at all yellow as it contains more or less molasses, which will be likely to cause dysentery.

G. HOLDING (Newbury).—*Preventive for "Isle of Wight" Disease.*—You cannot do better than use Izal. Spray the alighting board and the ground round the hive once or twice a week with Izal and water in the proportion of one teaspoonful of Izal to each pint of water. Instead of using Izal on the ground it may be thickly sprinkled with lime—quicklime is best. Place a shallow tin lid—from a 1d. tin of boot polish or one similar—containing a teaspoonful, or a little more, of Izal on the floor-board of the hive, at the far side from the entrance. Cover the lid with a piece of wire cloth or perforated zinc to keep bees from falling into it, or keep the hive supplied with naphthalene and Apicure.

DUNCAN C. FORD.—The bee was a native drone.

Honey Sample.

J. C. GARVEY (Ireland).—The honey is of fair density and appears to be properly ripened. It would improve if kept exposed in a warm dustless place for a few days. It is mainly from clover. The quality is *good.*

Suspected Disease.

G. E. MASON (Countesthorpe), CAURNIE No. 3 (Glasgow).—The bees are suffering from "Isle of Wight" disease.

E. J. W. (Street).—We have not received the bees.

W. A. S. (Marple Bridge).—The bees are suffering from "Isle of Wight" disease. It will be best to destroy the bees and all appliances that cannot be disinfected.

E. WHITEHOUSE (Newland).—It is "Isle of Wight" disease. Better destroy them and use the Izal treatment or one of the other remedies on the other stocks as a preventive.

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices (not exceeding 7 lines) in this column, 10 lines charged 3s. 6d., up to 15 lines 5s., which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

Cannock Horticultural Show, Monday and Tuesday, August 7th and 8th. Eight Classes for Honey, &c., open to all. Good prizes offered. Jno. Bird, Secretary, 62, Allport-road, Cannock. Entries close August 1st.

Special Prepaid Advertisements

Two Words One Penny, minimum Sixpence.

Will advertisers please read these Rules carefully in order to save trouble, as they will in future be strictly adhered to.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not permissible at above rate, but will be inserted at* 1d. *per word as* **"Business"** *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of* 3s. *per* ¼*in., or* 5s. *per inch.*

PRIVATE ADVERTISEMENTS are only intended for readers having **Surplus Stock** *to dispose of.* **Driven bees, Nuclei,** *and* **Queens that are reared or imported for sale,** *are Trade Advertisements, and can only be accepted under trade terms.*

Advertisements must reach us NOT LATER than FIRST POST on TUESDAY MORNING for insertion in the "Journal" the same week.

Orders for three or more consecutive insertions in "The Bee Journal" entitle advertisers to one insertion in "The Bee-Keepers' Record" free of charge.

PRIVATE ADVERTISEMENTS.

TO clear. Porter escapes, slightly soiled, 1s.; feeding-bottles, with stages, 1s. each; section racks, complete, 3s 9d.; drawn out shallow combs, 5s. doz.; lever honey-tins, unused, 7lbs. 6s., 14lbs. 8s., 28lbs. 10s., 56lbs. 17s. dozen; excluder zincs, 1s. —X. Y. Z., BEE JOURNAL OFFICE, 23, Bedford-street, W.C.

TWO 28lb. tins good quality honey, 7d. lb; sample 2d.—C. KIDBY, Sizewell-road, Leiston, Suffolk. v 32

SURPLUS Dutch queens, immune from disease, or English-Dutch crosses, 5s. each.—K. POLAND, Greenlands, Caterham.

FEW young native and hybrid queens, 5s. each; one 3-framed nuclei.—HUNT, Westmoors, Dorset. v 31

POULTRY exchanged for extractor, must be in good condition.—LILLY, The Retreat, Four Marks, Alton. v 30

WANTED, extracted honey in bulk at 65s. cwt., delivered.—Samples to W. H. WYATT, Bishopswood, Chard, Somerset. v 29

WANTED, honey in 28lb. tins, this season's; also set of lantern slides on bees.—BECK, Airton, Leeds. v 28

STOCKS.—Few very vigorous young Italian or hybrid queens, will resist disease, 32s. 6d.; never had disease in apiary.—PURSALL, 144, Hill Top, West Bromwich. v 27

WANTED, beeswax, extracted or otherwise; price and samples.—SCOTT, Derby-street, Great Horton, Bradford. v 24

WANTED, bee books, secondhand; quote price, author, edition, and year published.—G. S. OETTLE, Box 5555, Johannesburg, South Africa. v 22

4-FRAMED Nuclei, hybrid, Carniolan strain, 1916 queen, 15s.; box to be returned.—J. HAGUE, Kirkham, Lancashire. v 21

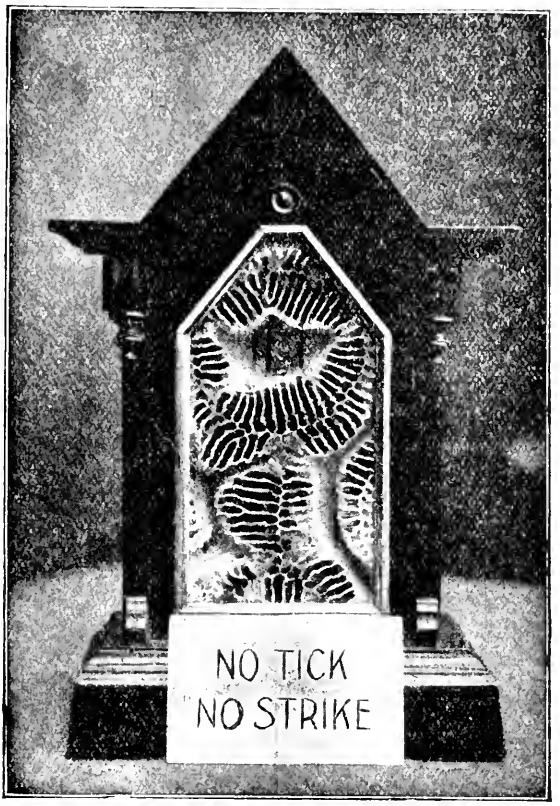
A FEW surplus pure imported Italian queens, fertile, 5s. each; guaranteed delivery.—No. 3 Apiary, Burton Latimer, Northants. v 9

SEVERAL four framed nuclei, disease resisting, Italian and hybrid Italian queens, 1916, 15s. each.—SMALLWOOD, Finchley-lane, Hendon, N.W.

WANTED, MAN (ineligible), public institution, light duties, 10s. per week, with board, lodging, and washing.—"W. E. M.," "BRITISH BEE JOURNAL" Office, 23, Bedford-street, Strand, London, W.C. v 12

FOR SALE, 24 dozen of 4¼ x 4¼ glasses, for glazing sections; cash; what offers?—RHYS EVANS, Four Elms, Edenbridge, Kent. v 16

PHOTOGRAPH of Comb in clock-case from which 7 lbs. of Honey was extracted. Seventy pounds were abstracted from the hive also. These Bees were badly affected by "Isle of Wight" Disease and treated by M. C. Pay of Croydon, and cured by IZAL washing, spraying and Izalized food. He had the hive given to him to be destroyed, May 24th, 1912, on which day he began his treatment.



"In IZAL they had placed in their hands a worthy and formidable weapon for battling against the bacillus."—*Sir James Crichton-Browne, F.R.S.*

By Appointment

2 Teaspoonfuls Izal Fluid to 1 gallon of water for washing and spraying New Queen Bee inserted on June 12th, 1912.

In September 77 lbs. Honey taken from them. At present, June, 1915, descendants of the original diseased bees are quite healthy.

IZAL

is a Reliable Remedy against Foul Brood.

Sold Everywhere in Bottles, **6d.** & **1/-** each.

Ask for full details of IZAL treatment sent post free by

Newton, Chambers & Co., Ltd., Thorncliffe, nr. Sheffield.

A ROLL OF HONOUR.

Although bee-keeping is considered a minor pursuit, we venture to say that it has provided more fighting men than the usual average of any industry. To place on record the part the members of our craft have played in the present war we propose to make a "Roll of Honour," and shall be pleased if our readers will forward us the NAMES and ADDRESSES, together with the REGIMENT and RANK, of any bee-keeper serving his King and Country at home or abroad; also if killed or wounded.

We print a further list of names to those sent in, and shall be pleased to have other names as soon as possible.

Sgt. R. Martin, 7, Young's Road, Alton, Hants—2nd Field Butchery, A.S.C., France.

REVIEW.

Kovkazkaya seraiya gornaiya Ptschela, by K. A. Gorbatcheff. (Published by the Caucasian State of Sericulture, Tiflis, price 65 copecs, or 1s. 4d.) This pamphlet gives the life history of the true Caucasian bee and its proper place among other bees. The author describes it as *Apis mellifera*, var. *Caucasica*, and mentions the characteristics distinguishing it from the two other varieties found in some parts of Caucasia. The true Gray Caucasian bee is found pure-bred in the high mountain regions of Transcaucasia. M. Gorbatcheff states that these bees are gentle, splendid workers and the queens are most prolific. His investigations as to the length of their tongues, as compared with those of bees from the middle of Russia, have proved conclusively that the grey bee from the mountainous districts of the Caucasus, owing to her long tongue, is able to obtain nectar from such flowers as red clover, which are inaccessible to other varieties of bees. This has been fully corroborated by M. Klingen, the manager of the estate of the Grand Duke Michael in the Government of Orel, and other practical bee-keepers.

In Leucoran, a district near the Persian border, there are bees of a golden hue. These differ from the pure Caucasian grey mountain bee, and belong to a distinct race of Persian bee. They go by the name of "Leucoran" bees, and were first described by Pallas as a distinct species, *Apis remipes Pallas*, and were wrongly supposed to be the typical bees of the Caucasus. They are the worst of the bees found in the Caucasus, being both lazy and great robbers, while the queens are very poor layers, consequently colonies do not develop rapidly. In Northern Caucasus there are crossbred bees which resemble the Persian bee, while in the valleys of Transcaucasia there are to be found crosses between the grey mountain bee and the yellow bee of Persia. It may be noted that the crossbreds from Transcaucasia show, in a striking manner, the peculiarities and qualities of the grey mountain bee, and the crossbreds from the Northern Caucasus resemble more closely the Persian bee.

As to the colouring of the mountain bees, those from Erivan and some parts of the district of Kars are an exception to the rule, because they show yellow colouring, and there is no doubt that they are close relatives of the Persian bees. They have, however, lived for a long time under the trying conditions of the mountain regions of the districts of Kars and Erivan, and have consequently become acclimatised and have acquired the qualities peculiar to the Caucasian mountain bee.

The pamphlet contains a coloured plate showing clearly the difference in the colouring of the queen worker and drone of the grey mountain bee, the crossbred bee, and the Persian bee. In addition, there is a map of Caucasia showing, in different colours, the districts in which the different varieties are found. The Department of Agriculture has assigned the necessary funds to the Caucasian Sericultural Station for the purpose of establishing a queen-rearing station in a high, isolated mountain district where the climate is severe and where the pure race is now being bred. No doubt there would be some difficulty in getting bees from the Caucasus now, but when the war is over we would recommend all who wish to try this hardy race of pure Caucasians to address themselves to the Station Séricicole du Caucase, Tiflis, Russia.

ANCIENT BEE LITERATURE.

VII.—BEES IN SACRED BOOKS.

In the Koran one chapter out of the 114 is devoted to bees, from which the following extracts are taken:—

"The Lord spake by inspiration to the bee. Make thyself dwellings in the mountains, in trees, and in the materials with which men make thee hives. From their stomachs issues a liquid of varied colours, in which is a medicine intended for man."

"This is honey, this sweet, wholesome substance, which sustains and strengthens

the body, which cures all maladies, a thousand times preferable to the poisons administered by the doctor to the human race."

Six admirable rules are given for the conduct of all who possess bees:—"1. No beekeeping family may quarrel or live in discord. 2. Two partners in an apiary must agree on all points. 3. In a house where bees are kept no stolen object must be admitted. 4. No wickedness of any kind can be allowed in such a house. 5. No guilty hand should be permitted to touch a bee-hive. 6. The surroundings of a hive must be kept very clean." Following a breach of any of these rules the bees will either perish or leave their dwellings, bringing a curse on the neighbourhood.

The bees are "sheep without a shepherd." They are, however, sacred insects, "blessed by God and placed above all His creatures after the human race."

"The bee alone has the honour of providing with its pleasant scent a substance created to be used in hours of devotion, and which lights the house of prayer for all religions." (In all R.C. places of worship a certain percentage of pure beeswax must be used in the manufacture of candles burned on the altars.) "Do not tapers burn in honour of prophets, of saints, and of the dead who have gone before us into another world? This is why the insect is sacred."

"Led by her Creator in all she undertakes, it is useless to look after her, she knows what to do, because nature advises her. Every other animal requires care to rear successfully; the bee alone has no need of the care of man, and God has given her a sting to remind man of the sin of his first parents. The bee, proud of possessing a venomous dart, prayed that the sting might be mortal. No, said the Almighty, and since thou art ill-disposed, it is thyself who shall die after having stung."

"The life of the bee is not known. Death takes place either once or twice a year from fatigue or that the old bees over-eat themselves, and returning to the hives are suddenly killed and thrown out by their comrades."

"Honey is gathered from all flowers and sweetened by the bee, who swallows it as nourishment. It ripens in the stomach and is deposited later on in the combs as excrement (Oh, Mahomet!!). The sap of flowers and juice of fruits are the only nourishment taken by the bees. Their excrements are very clean for our consumption!!"

"Wax is collected from flowers sticking to their feet carried into the hive, and kneaded into a dough for the construction of the comb." This last is a very old bee-belief, and at not a very distant date was the universal explanation of the source of wax.

In our own Bible the bee itself does not receive such praise as is given to the ant; but in some versions, Proverbs vi.,8, reads as follows:—"Go to the bee, and learn how diligent she is, and what a noble work she produces, whose labours Kings and private men use for their health: she is desired and honoured by all, and though weak in strength, yet since she values wisdom she prevails." In another translation, an edition of 1603, Ecclesiastes xi. 3, reads:—"The bee is small among the fowles, yet doth its fruite passe in sweetnesse." Their propensity to sting when meddled with was well known, for we have Israel's enemies compared to infuriated bees:—"They compassed me about like bees." "And the Amorites came out and chased you as bees do." Bees themselves, however, as an actual fighting force, were used to circumvent and defeat enemies in real battles in these ancient times. "The bee that is in the land of Assyria" was very fierce.

Honey was used frequently in the Old Testament in the form of simile or metaphor, of which the following may be taken as examples:—"Sweeter than honey and the honey-comb"; "Words sweeter than honey to my mouth"; "Pleasant words are as an honeycomb, sweet to the soul and health to the bones"; "Thy lips, my spouse, drop as the honeycomb: honey and milk are under thy tongue."

Honey was as much admired and valued by Solomon as by Mahomet, and he counselled his son to partake of it. "My son, eat thou honey because it is good, and the honeycomb which is sweet to the taste." He esteemed it not only as a sweet, but also as a health-giving food—"Honey is sweet to the soul and health to the bones." Yet, being wise, he recognised that an over-indulgence would be injurious. "Eat so much as is sufficient for thee"; and he emphasises this by adding, "It is not good to eat much honey." Apparently they partook of honey in the comb, and also in the "dropped" or extracted form—liquid honey. "I have eaten my honeycomb with my honey."

Space permits only a mere reference to the stories of Samson's honey taken from his amateur hive; of the wild honey found in the Wilderness by John Baptist; of Jonathan's find in the woods of Ephraim where, no doubt, *Apis Fasciata* had left honey in the comb; Jacob, we learn, sent a present of "a little honey" to the great man of the land of Egypt; and King Jeroboam sent "a cruse, or bottle, of honey"

as a propitiary present to the prophet Ahijah.

The Canaanites "traded in wheat, and oil and *honey*." They knew, also, how to use it in baking, for they had "cracknels," fine cakes, with honey as one of the ingredients. They had also honey "wafers," a thin cake or biscuit. "The taste of it was like wafers made of honey."

"They brought in the first fruits of corn, wine and honey," shows that honey was a welcome gift. In the Temple sacrifices its use was forbidden, in common with that of milk, perhaps because both were liable to ferment. Another reason may have been that salt, which was a necessary part of an offering, would not go well with honey. A more important reason still may be that honey was so much in evidence at all the feasts and sacrifices of the various Gods and Goddesses that the new dispensation discarded it wholly.

The Talmud, as we have seen, highly valued the bee, and it placed a very high estimate on honey, bracketing it with four other things of the highest value.

Wax deserves a passing notice. It, with honey, was included in the Jewish pharmacopœia, and was partaken of as a cure for internal troubles. It was used as an illuminant at an early period. In Isaiah, Jeremiah, and Luke, we have pretty clear evidence that it was used for writing on in the form of a table or tablet. The writing was done with a sharp, pointed stylo or pen, and rubbed out when it had served its purpose.

NOTE.—A few misprints have crept into the text which it may be well to correct. On page 109 scold should read scald or skald, and Bahilos, Babilos. Simon, page 147, should be Sinon, and Keonos, page 171, Kronos. *Mel*, on page 210, has been corrupted into sack. On this page for "to fight the fabled Minotaur," please read, "to search for the coveted prize"—the Golden Fleece. M.

BLURTS FROM A SCRATCHY PEN.

THE HARVEST AND THE WAR.

I have something of an apology to make to the Clerk of the Weather. I have not spared him in bygone months, but lately he seems to have been in better temper. My *Evening News* tells me that his good mood has existed for eight days—so far, so well. As I have trounced him for his bad behaviour, I must, in justice, compliment him for showing that he can behave respectably when he likes. But I am afraid I don't trust him much, and that he does not like much.

How wonderful has been the change. Honey has simply been rolling into shallow frames, and sections, which ten days ago were not drawn out, lifeless as to bees, but which are now assuming that whiteness of capping, and thickness of top, which we know means plentifulness. The happy hum of the workers inside the hive, the crush of the foragers, hustling and tumbling over each other in their eagerness to enter, and get rid of their load; the noisy hum of the drone circling round the hive (he might be "boss" of the whole show, if we judged him by the importance he assumes) and occasionally, not very often, the shriller song of the queen, as she ventures out on her wedding trip: all these signs indicate a teeming harvest. Grant that so it may be.

And how delicious is the countryside. The meadow, hitherto green-flecked with the white marguerites, as they were stars, and the crimson poppy giving that flash of colour which painters know how to seize now they assume a russet brown. The whirl of the mower sounds a continuous jar as he circles the meadows in ever narrowing rings. The swathes of grass lie in long lines the day through. The sun dries them in the day-time with its ardent heat, but in the coolness of the night the heavy dew refreshes them, and there then germinates that sweet scent of the hayfield to which your manufactured perfumes are a ghastly mockery and a sham, and would you revel in this delight then needs you must get up in the early morning, ere yet the sun has reached its heat. Nature is kind to those who woo her in the first of the day. The mist and the shadows are soft and grey; the dewdrops, as if there were thousands of diamonds, sparkle in the level sun rays; the birds twitter and sing ere they are driven by the noontide heat to the thicknesses of the woods. The fish in the mill pool leaps after the passing fly, and the scudding moor hen skims the weeds, leaving a long track as its feet just touch the surface, and all is peace and gladness.

The promise of the harvest is good, now the corn in the ear is getting substance. Ere long the fields will have their harvest tints, while other lands, not far away, are desolated by war; while they echo with the cannon's roar and are crushed by the tramp of armed thousands, our own lands are smiling with peace and the wealth of abundance. It is vain to seek for signs. The interpretation may not be as you would read them. Yet, at the same time, it seems to me that just at that period when we need a good harvest, when a bad one would almost spell famine, then, just then, Providence is giving us what we need so much. No level-headed neutral would, for a moment, be deceived by the

organised lies of our enemies. We know our cause is just. We have suffered, and sometimes a little encouragement is useful to help us "carry on." Is it to be found here at home, in our abundant acres? Soldiers from "places in France" tell us of visions of angels, and in the ruined churches the crucifix and the statues of the Virgin are unscathed amidst the hail of shrapnel. In England we have good harvests. "Carry on! Carry on!"

J. SMALLWOOD.

CRAYFORD AND DISTRICT BEE-KEEPERS' ASSOCIATION.

ANNUAL HONEY SHOW, 1916.

To be staged in the studio, Maypole House, Dartford Heath, Saturday, August 26th, by kind permission of Mr. Knight.

Entries must be staged ready for judging at 12 noon. Show opens 3.30 p.m.

Competitive classes (open to members only). Entries close August 19th.

Class 1. 6 sections of honey.
,, 2. 3 sections of honey.
,, 3. 3 jars of light extracted honey.
,, 4. 3 jars of dark extracted honey.
,, 5. 3 jars of granulated honey.
,, 6. 2 shallow frames.
,, 7. Beeswax (any shape).
,, 8. Honey cake (not less than 1lb.).
,, 9. Honey products, collection, such as mead, vinegar, candy sweets, beeswax, etc., etc., etc.
,, 10. Home-made bee appliances (to be judged for utility).
,, 11. Exhibits of an educational or scientific nature, such as photographs, lantern slides, drawings, etc., etc.
,, 12. Gift class (1 1lb. jar of honey). To be sold, proceeds to prize fund.
,, 13. Gift class (1 section of honey). To be sold, proceeds to prize fund.

(Classes 1 to 11, each entry 3d. Classes 12 and 13, entrance free.)

Members are at liberty to make more than one entry in each class, but only one prize will be awarded in each class to an individual exhibitor. It is not essential that the honey or wax should be of the current year's production, but it must have been produced by exhibitor's own bees.

THE "BRYDEN" SILVER CHALLENGE CUP.

To encourage competition the silver challenge cup presented to the Association by Mr. Bryden, and which was exhibited at the recent meetings, will be awarded, under the conditions laid down, to the member gaining the highest number of points in the above classes.

EXHIBITIONS.

It is proposed to again make a collective exhibition, in the form of a trophy, of member's honey and produce loaned for the occasion. An effort is being made to obtain a collection of Colonial samples of honey, beeswax, and other exhibits of interest to bee-keepers. An exhibition of new hives and appliances is also being arranged.

HONEY JUDGING COMPETITION.

6 jars of extracted honey from various sources will be submitted, and competitors will place them in order of merit according to their judgment. The competitors coming nearest to the judge's sealed award will be the winners. Entries 3d.

GUESSING COMPETITION.

3 samples of bee-produce will be obtained. Competitors naming all correctly will receive the entrance fees as prizes. Entries 1d.

FRAME BUILDING AND SECTION FOLDING COMPETITION.

Competitors will build 3 standard frames (wired) complete, and fold 6 sections. Frames, sections, and foundation will be provided by the Association; competitors must bring other apparatus. Entries free.

The following demonstrations have been arranged:—

1. Candy making - Mr. G. H. Barnes.
2. Frame building - Mr. C. F. Gee.

PRIZE FUND.

In order to provide prizes for the winning exhibits in the above classes a special fund has been opened, and contributions are invited. All donations, however small, will be gratefully acknowledged.

Members are invited to submit for inspection any apparatus, or articles of any description, of interest to bee-keepers.

Refreshments will be provided as usual by the Ladies' Social Committee.

Hon. Sec.: Mr. G. W. Judge, Barrowdene, Shepherd's Lane, Dartford.

ONTARIO BEEKEEPING.

The first Summer Course in Beekeeping was held at the Ontario Agricultural College, June 12th to 16th, 1916. There were about 20 in attendance, which was a good number considering the busy season and the fact that backward weather had put all farmers behind with their work.

The speakers included Mr. Frank C. Pellett, State Apiarist, of Iowa; Mr. F.

W. L. Sladen, of the Central Experimental Farm, Ottawa; Mr. James Armstrong, Vice-President of the Ontario Beekeepers' Association; Morley Pettit, Provincial Apairist, and Geo. T. Kingsmill, Assistant to the Provincial Apiarist.

The work was concluded to supplement the winter course, applying in the apiary the things learned in the class-room. Members of the class were expected to supply themselves with veils and smokers and were given apiary practice.

MORLEY PETTIT.

WIRE QUEEN EXCLUDERS.

By W. J. Sheppard, Nelson, B.C.

I have been using the "Wilkes" wire queen excluders this season and find I must discard them as the queens are able to get through. The wires are evidently too far apart, and it is easy to bend them. These excluders were shipped in from England, and cost, delivered here, a little over a dollar each. The new wire excluder, made in Canada, and put on the market this year, is a great improvement The wires are larger and made of steel. There are also more cross struts, which give greater strength and rigidity, and make it highly improbable that any of the wires can be accidentally bent. The spacing, also, is apparently quite accurate, as no queen has yet succeeded in getting through either of the three I have at present in use nor have I heard of any others failing in this respect. The only fault I can see in them is that the wooden binding is not perfect, as too much space is allowed on the under side, nearly doubling the bee-space over the tops of the frames, which is sure to invite the building of burr combs. This can be easily remedied, however, and in those I am using I have reduced this by planing down as far as possible. Wire excluders, if accurately and strongly made, will, I feel sure, be found a great improvement on zinc excluders. There are no sharp angles for the bees to pass and the ventilation is not impeded, this having often been a fruitful cause of swarming in the past. The bees are able to get through the wires so easily that any obstruction to their movements is practically non-existent.

A curious incident took place at Penang while the P. and O. steamer *Nellore* was lying in harbour. A swarm of bees flew out to the ship and settled on the stern, and certain superstitious passengers looked upon it as a good omen for a safe voyage home.

CORRESPONDENCE.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

PACKAGE FOR HONEY.

[9297] The present, having regard to the season, as well as to the inconvenience and scarcity caused through the war, may be an opportune time to consider the vexed question of "package," in conjunction with the "business" problems of honey production.

Can we get over our prejudice with regard to tins—they are far more economical and safer? Can we get a superior lined article that will do? I will admit the temptation and liability to lower and tamper with quality, but if we adopt a uniform label, with personal advertising and local area guarantee, this should be considerably mitigated.

I have lately, and on several occasions, been able to get some honey packed in such a manner without any deleterious effects, and in only one case have I seen a corroded lid. This cannot be said of bottle caps. Most trades are preparing for a stride forward shortly; are we going to be in the running? We don't appear very interested, and we have a lot to pull up if we are going to get level with Colonial competitors. A. H. HAMSHAR.

DIOXOGEN AND "ISLE OF WIGHT" DISEASE.

[9298] I am sure the thanks of every beekeeper is due to the Rev. A. H. Hollis for the open-hearted way he has given to one and all, through the medium of the B.B.J., his experiences with, and apparent cure of, the "Isle of Wight" disease. Whether "Dioxogen" will prove to be a permanent or in any way a cure for the disease is not, just at the moment, the point. What I feel is that it is only by continual research, investigation, and experimenting that we shall, as in the case of foul brood, find a remedy. May anyone who finds out anything of good or benefit to beekeepers in general adopt

the same spirit of Brother Hollis. Only by doing good to others can we experience the true happiness of life. I was glad to see, this week, directions how to use this "Dioxogen." Though I experimented at once with it and used a bottle with some very fine holes pierced in the cork, I am thankful to say there is a decided improvement in the five stocks treated. I will report progress later.—R. LITMAN.

DIOXOGEN AND "ISLE OF WIGHT" DISEASE.

[9299] I have twelve stocks of bees, and for three weeks there has been from one an average of 100 per day dead from "Isle of Wight" disease, the alighting board covered with crawlers, and the ground strewed with hundreds of them. I could not bring myself to destroy the stock, as I fully believed the disease would spread to the other stocks. After reading of "An Amateur's Treatment of 'Isle of Wight' Disease" on page 227 of B.B.J. for July 20th, I got a 2s. bottle of peroxide of hydrogen from Boots' Stores. I squirted some of this, without adding any water, well into the entrance of the hive. I fully expected I had overdone it, and that it was a case of "kill or cure." *Two hours* after every bee was in full flight and gathering nectar. For *four* days they have been working *their hardest*, and *no* diseased or crawling bees have been seen since, everything all right. I did *not* spray combs or bees, only the *floor board*. I shall repeat the treatment once or twice a week for a week or two, and I should like to heartily shake hands with the Rev. A. H. Hollis.—J. DRAPER, Swanwick.

PRESS CUTTING.

BEESWAX.

Beeswax, says a Russian correspondent, is a necessity of the Orthodox Church, which institution, it may be observed, has its own candle factories, wherein the candles for the Orthodox churches are made. But hitherto—*i.e.*, down to the opening of the war—Russia did not produce half the wax she required. She obtained the rest from abroad, mostly Germany. With the stoppage of the German supply a severe crisis supervened. The usual wax harvest in Russia has been estimated at about 1,000,000 poods (16,500 tons), but, owing to the war, the current production may be called three-quarters of a million of poods (12,500 tons), or something more. It is calculated that about 600,000 poods (10,000 tons) a year find their way to the Church candle factories.

The Russian wax business fell into the hands of the Germans, who, in the language of another correspondent, bought the wax from the agriculturists at about 20 roubles per pood, took it to Germany, where it was "refined" with an addition of mineral wax, and resold it to Russia—*i.e.*, to the Eparchial (Church) candle factories, at about 27 roubles per pood. About 200,000 poods of beeswax (including "admixed, refined, pure") found its way to Russia annually. It puzzles many to explain why the Eparchial candle factories preferred to buy the wax from the Germans and to pay them more than they could have bought it for from the home producers. There is no need to follow the tangled thread of methods of procuring Russian beeswax from foreign countries. The latest development appears to be, as recounted in the *Novoie Vremya*, the conclusion of an agreement with an agent named Stumpf, whereby the candle factories' central committee is to buy wax for all the Russian Eparchial factories only through the said Stumpf, and to pay him a commission of 20 copecks (5d.) per pood (36 lbs.).

How rapidly Germany improved her position in Russia as beeswax furnisher can be seen by the fact that in 1900 Russia imported 152,000 poods, of which Germany supplied 97,000 poods, and in 1912 263,000 poods, of which 217,000 poods were obtained from Germany. Other countries shared in the business thus:—England, 11,000 poods; Holland, 3,000 poods; Spain, 4,000 poods; Portugal, 3,000 poods; Turkey, 5,500 poods; other countries, 19,000 poods.

Why the Russian candle factories should have come under such dependence on Germany is a problem too complicated to elucidate, though one observer states that the Eparchial authorities had arranged to buy their wax in large parcels, and to do so had, of course, to deal with large houses. Of these there were three—one being German—viz., the Luneburg Wax Bleaching Factory; and two were Russian: A. Beltz, of Petrograd, and P. S. Kaptelin Successors, of Moscow. He suggests, without seeking to prove it, a bond uniting these three houses. But in any case, they obtained control of the wax supply to the Church candle factories by progressively eliminating the small houses from the competition. The effectiveness of their operations is shown in that, whilst the factories bought 165,000 poods of foreign wax in 1908 (without reference, in the statement quoted from, to the three houses named), these houses supplied 80,000 poods of the 164,000 poods imported in 1909; 78,000 poods out of 143,000 poods in 1910; 162,000 poods out of 188,000 poods in 1911; 203,000 poods out of 215,000 poods in 1912, and 187,000 poods out of 210,000 poods in 1913. Thus with relatively slight variations the wax importation business in Russia had passed right into the hands of these three houses.

In the hope of changing the position in favour of Russian agriculturists a Bee-

keepers' Congress was held recently for the purpose of establishing a community of interests and generally encouraging the Russian production of honey and beeswax. Hitherto Russia has been producing a large part of what she requires. The war cannot be expected at the close to re-establish things just as they were. On the other hand, the wax industry includes many small producers. To collect, concentrate and market the wax involves organisation. If the business is to be held the basis of the organisation should be laid now. The Church hitherto has not proved to be oversympathetic with the small producers. It has a weakness for purchasing large quantities—in a word, simplifying the commercial operations it has elected to engage in.—From the *Financier and Bullionist*, Russian Section.

Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. All questions must be accompanied by the sender's name and address, not necessarily for publication, but as a guarantee of good faith. There is no fee for answering questions.

S. J. GALBRAITH (Forres).—*Using Honey and Combs from Diseased Bees.*—It is not safe to use the honey for feeding bees, but it is quite wholesome for domestic use. The combs may be soaked in, or well syringed with, a 5 per cent. solution of formaldehyde. It is much safer to use new frames and foundation. You would find the answer to your other queries in the BRITISH BEE JOURNAL last week.

R. A. (Salop).—*Formaldehyde and "Isle of Wight" Disease.*—It is not efficacious alone, but has been tried with good results in combination with other things. Thoroughly syringing or soaking with a 5 per cent. solution is safer than fumigating.

P. MURRAY THOMPSON (Cumberland).—The queen had not mated. The eggs of a queen that has not mated will only produce drones, but the eggs are laid in a compact space and not scattered like those of a laying worker. It does not always follow that a drone breeding queen is one that has not mated; she may be aged or have sustained some injury.

Your prompt measures may have scotched the disease, but take what preventive measures with the others you can, as recommended in the JOURNAL from time to time. You would find your other queries answered in BRITISH BEE JOURNAL last week.

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices (not exceeding 7 lines) in this column, 10 lines charged 3s. 6d., up to 15 lines 5s., which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

Cannock Horticultural Show, Monday and Tuesday, August 7th and 8th. Eight Classes for Honey, &c., open to all. Good prizes offered. Jno. Bird, Secretary, 62, Allport-road, Cannock. Entries closed.

Special Prepaid Advertisements

Two Words One Penny, minimum Sixpence.

Will advertisers please read these Rules carefully in order to save trouble, as they will in future be strictly adhered to.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not permissible at above rate, but will be inserted at 1d. per word as* **"Business"** *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of 3s. per ¼in., or 5s. per inch.*

PRIVATE ADVERTISEMENTS are only intended for readers having **Surplus Stock** *to dispose of.* **Driven bees, Nuclei,** *and* **Queens that are reared or imported for sale,** *are Trade Advertisements, and can only be accepted under trade terms.*

Advertisements must reach us NOT LATER than FIRST POST on TUESDAY MORNING for insertion in the "Journal" the same week.

Orders for three or more consecutive insertions in "The Bee Journal" entitle advertisers to one insertion in "The Bee-Keepers' Record" free of charge.

PRIVATE ADVERTISEMENTS.

A 5 FRAME nucleus, brood in all frames, 1916 laying queen, bred from Simmins' immunes, price 20s.; box to be returned.—A. MAGSON, Kirkham, Lancashire. v 36

EXTRACTOR wanted, geared preferred.—Particulars to HOPKINS, Shady Rock, Clent, Worcestershire. v 38

SEVERAL stocks of bees for sale, 10 frames, 1916 queens, guaranteed healthy, f.o.r., boxes returnable, £1; inspection invited.—OBORNE, 25, Guest-road, Bishopstoke, Hants. v 37

TO clear. Porter escapes, slightly soiled, 1s.; feeding-bottles, with stages, 1s. each; section racks, complete, 3s 9d.; drawn out shallow combs, 5s. doz.; lever honey-tins, unused, 7lbs. 6s., 14lbs. 8s., 28lbs. 10s., 56lbs. 17s. dozen; excluder zincs, 1s.—X. Y. Z., BEE JOURNAL OFFICE, 23, Bedford-street, W.C.

FEW young native and hybrid queens, 5s. each; one 3-framed nuclei.—HUNT, Westmoors, Dorset. v 31

WANTED, extracted honey in bulk at 65s. cwt., delivered.—Samples to W. H. WYATT, Bishopswood, Chard, Somerset. v 29

WANTED, honey in 28lb. tins, this season's; also set of lantern slides on bees.—BECK, Airton, Leeds. v 28

SEVERAL four framed nuclei, disease resisting, Italian and hybrid Italian queens, 1916, 15s. each.—SMALLWOOD, Finchley-lane, Hendon, N.W.

WANTED, MAN (ineligible), public institution, light duties, 10s. per week, with board, lodging, and washing.—"W. E. M.," "BRITISH BEE JOURNAL" Office, 23, Bedford-street, Strand, London, W.C. v 12

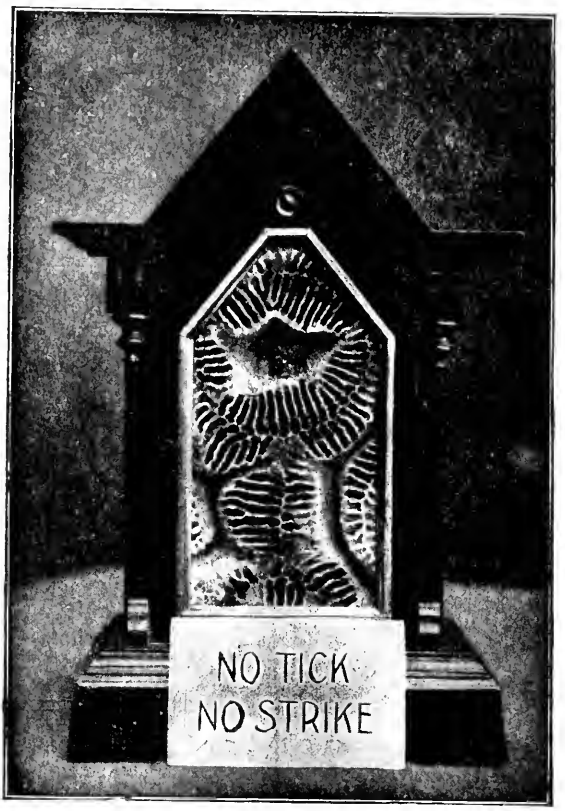
WANTED, for educational purposes, piece of comb containing foul brood.—BRITISH BEE JOURNAL Office, 23, Bedford-street, Strand, London, W.C.

SHALLOW FRAME RACKS, complete with drawn out shallow frames, 2s. 6d. each, to clear; free from disease.—DOLLIS PARK POULTRY FARM, Church End, Finchley.

BUSINESS ADVERTISEMENTS.

CHOICE PROLIFIC ENGLISH QUEENS, 1916, selected and tested, bred from non-swarming stocks, 5s. 6d. each; safe arrival guaranteed; 13th year.—ARTHUR H. WILKES, Four Oaks, Birmingham.

PHOTOGRAPH of Comb in clock-case from which 7 lbs. of Honey was extracted. Seventy pounds were abstracted from the hive also. These Bees were badly affected by "Isle of Wight" Disease and treated by M. C. Pay of Croydon, and cured by IZAL washing, spraying and Izalized food. He had the hive given to him to be destroyed, May 24th, 1912, on which day he began his treatment.



"In IZAL they had placed in their hands a worthy and formidable weapon for battling against the bacillus."—*Sir James Crichton-Browne, F.R.S.*

By Appointment.

2 Teaspoonfuls Izal Fluid to 1 gallon of water for washing and spraying New Queen Bee inserted on June 12th, 1912.

In September 77 lbs. Honey taken from them. At present, June, 1915, descendants of the original diseased bees are quite healthy.

IZAL

is a Reliable Remedy against Foul Brood.

Sold Everywhere in Bottles, **6d.** & **1/-** each.

Ask for full details of IZAL treatment sent post free by

Newton, Chambers & Co., Ltd., Thorncliffe, nr. Sheffield.

Editorial

A ROLL OF HONOUR.

Although bee-keeping is considered a minor pursuit, we venture to say that it has provided more fighting men than the usual average of any industry. To place on record the part the members of our craft have played in the present war we propose to make a "Roll of Honour," and shall be pleased if our readers will forward us the NAMES and ADDRESSES, together with the REGIMENT and RANK, of any bee-keeper serving his King and Country at home or abroad; also if killed or wounded.

We print a further list of names to those sent in, and shall be pleased to have other names as soon as possible.

Major E. Elger, D.S.O., "Colinshays," Bruton.—1st Somerset Regt.

Capt. St. John Mildmay, Queen Camel, Bath.— 60th Rifles.

Coy. Sgt.-Major J. Bindon, 11, Coombe Street, Bruton.—1/4 Somerset.

Trooper V. Davis, North Barrow, Sparkford, Bath.—Imp. Dorset Yeomanry.

AN INGENIOUS WASP TRAP.

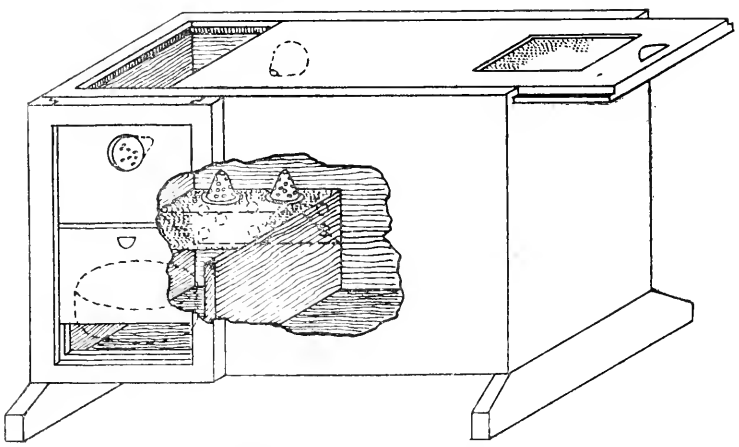
This clever device, invented by Mr. George Bryden, of Hamilton House, Rochester, Vice-President of the Crayford and District Beekeepers' Association, has been used with most successful results.

These traps placed in wasp ridden areas last season caught the insects by thousands, and although there is ample space for a large number, in some cases the traps had to be emptied one or twice a day.

The publication of details of this device is made by the courtesy of Mr. Bryden to enable beekeepers and others to deal with the wasp problem in an easy and efficient manner when the season arrives.

It can be easily made by the veriest amateur at handling tools, and consists of a box, say 18ins. long by 9ins. high and 8ins. broad, or any ready made box about that size can be used, as shown by sketch. The principle being that an inner chamber, to preserve the bait, is made at one end by a cross piece about 4ins. deep and covered by perforated zinc. For access to this chamber, one side of the box is cut and a lifting hatch is made with outside runners, so that a tin, containing sugar and beer or other substance attractive to wasps, can be inserted and used continuously. Centre bit holes near top of box are made each side over this chamber, and brass cone escapes fixed pointing inwards to emit the aroma of the liquor and admit the wasps seeking it. Once in, it is a 1000 to 1 chance of them finding the small hole at the apex to escape again—but they will be attracted to the light at the other end of the box, where the panel of perforated zinc is inserted in the lid. They soon die of starvation and exhaustion, and then drop to the bottom of the box.

The above is sufficient for general purposes, but an improvement is further suggested, and shown on the sketch, by cutting a few centre bit holes through the plain side of box and having a sloping piece of perforated zinc fastened to inside of box and brought up to underside of perforated cover fixed with solder or wire.



AN INGENIOUS WASP TRAP.

Holes will have to be cut for the two extra brass cones, which can either be soldered or wired down. This will give extra facilities for wasps to enter and will, perhaps, be found advantageous.

Modifications of this trap will, no doubt, best suggest themselves to readers and probably improvements will be devised, such as substituting either the "Watts" or "Porter" escapes for the cones, but as long as it is made "wasp tight" it matters little.

QUEEN-REARING AND INTRODUCTION.

(*Continued from page 235.*)

The workers can easily be imprisoned, as shown at No. 1, Fig. 92. Both hands are left free to work by resting the comb upside down on the top of the frames, the cage is held below the cluster of bees, and the workers scraped down with the glass slip. The holes will be filled, but it is an easy matter to liberate the workers until just sufficient are left as attendants to the queen, she being placed in the cage last. The method of catching the queen is shown at No. 2. The comb is held steady with the left hand. No. 3 shows the queen caught, while at No. 4 she is being put into the cage. A closer view, No. 5, shows how the slip of glass is used when running her in (note the upward slant of the cage to keep the workers in the top hole). No. 6 illustrates the sliding on of the zinc in place of the glass (note the zinc is allowed to pass under the glass). The large cage will carry more food and thirty to forty workers. In the small cage six to eight attendants should be put with the queen in warm weather and a dozen to fifteen when it is cold.

In a case of emergency a queen cage on the lines of the pipe cover can be made as shown at No. 13, Fig. 84. Take a piece of perforated zinc or wire cloth about 3 in. square, left side, cut out the four corners, as seen in the centre, to allow it to be folded into a square box, as seen on the right. This can be forced into the comb, as illustrated at Fig. 93. Such a cage costs nothing beyond the trouble of making.

Another method I have adopted many times without a single failure is to use a piece of perforated zinc and a glass tumbler. The queen and a few workers are placed in the tumbler and stood upon the square of perforated zinc, which is large enough to cover the feed hole in the quilt. The flap is then turned back, and the zinc-covered tumbler placed in position, as shown at Fig. 94. For food, a lump of sugar moistened with water is put under the tumbler, which should be well wrapped up with the quilts to keep the queen warm. At the end of the time necessary for safe introduction the zinc is slipped from underneath, and the queen allowed to descend. This method can be still further simplified by the use of the inside portion of a matchbox in place of the tumbler.

Virgin queens are not fit to travel until they are at least twenty-four hours old; they can be introduced to queenless stocks or those containing queen cells of any age without caging when they are not more than one day old, either by running in at the entrance or dropping them between the combs. After that age they should always be caged; any queen cells built must be destroyed.

When introducing a queen to a stock containing a laying worker or one that has

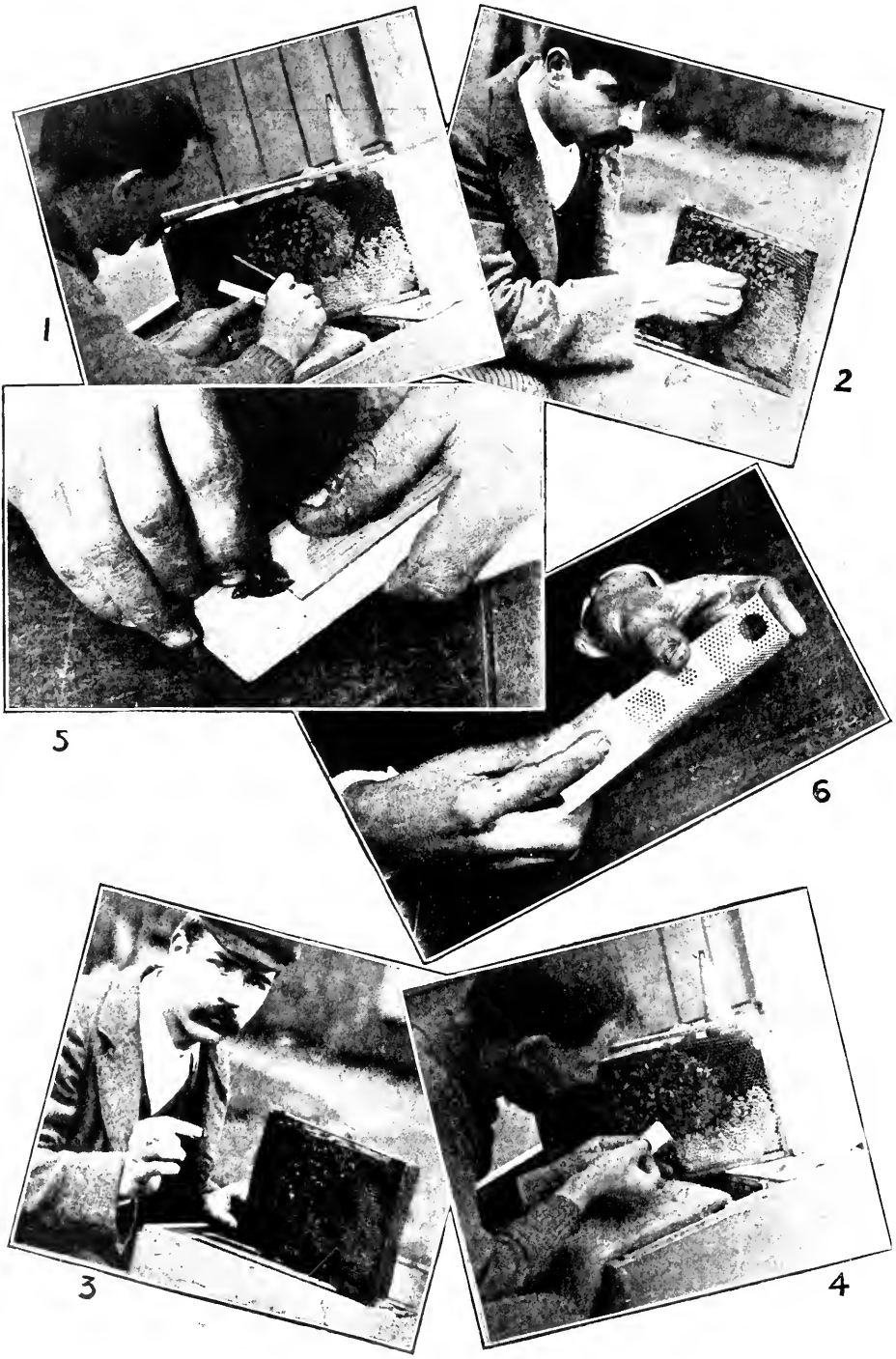


FIG. 92.

been queenless for a considerable period, cage her on a comb of unsealed brood from another stock.

Queens that have travelled in a cage through the post rarely lay so well again in their new home. I have had selected queens from noted breeders, properly packed,

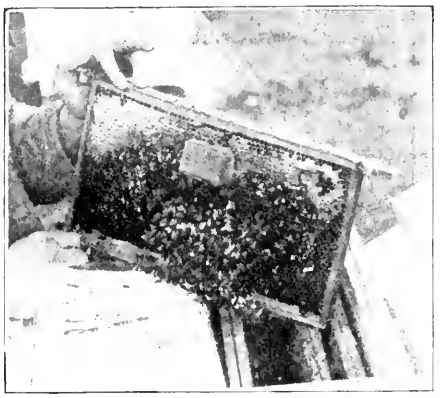


Fig. 93.

Fig. 94.

that have never laid again after I have received them, and I have sent out splendid tested queens that have shown the same fault in the hands of the recipient. Fertile queens from strong stocks, in full lay, with their ovaries loaded with eggs, should not be sent straight off. Reduce the eggs in the ovaries by placing the queen in a small nucleus for a few days before despatching.

(*To be continued.*)

CORRESPONDENCE.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

INCUBATION OF BEES.

[9300] Please permit me to draw your attention, and that of your subscribers, to a little experiment which I think is likely to be one of great interest to our brother apiculturists, as well as of not a little practical utility.

It must be now some twenty years ago, more or less, since I had the pleasure of meeting Mr. T. W. Cowan and Mr. W. B. Carr together at the Royal Agricultural Show, held that year at Doncaster. They were amused at an incident I mentioned to them, and at a suggestion arising from it. I remarked to them that having upon one occasion cut out some queen cells from one of my hives it had occurred to me to pin them up near a kitchen hot-water cylinder, and that from each cell a fine, healthy young queen had emerged. I then suggested to them the possibility of a bee incubator which I thought might prove exceedingly useful. They laughingly advised me to try the experiment. It unfortunately happened that shortly afterwards I was compelled to change my address, and I had not the opportunity of giving a trial to bee incubation until last summer, and that too late in the season to obtain definite results. This year, however, I have continued the trials with marked success, though having but few hives, and I should like to ask others, who have better opportunity than I have, to test the idea, and ascertain if it is or is not of practical use.

As to the incubator, it may be most simple and inexpensive in construction. In my case I happened to have by me a boiler from a cheap chicken incubator bought some years before. It is about two feet by 18 inches in size, and only about

an inch deep, except at one end, under which there is a hot-air flue warmed by the flame of a small lamp. The vessel is divided internally by a partition which runs longitudinally down the centre to within an inch or two of each end.

A flow and return of hot water is thus obtained, the end further from the lamp being slightly raised. I use a small Bunsen gas burner, which formed a part of "the pearl" burner which is used to give a small incandescent light in lobbies, etc. The blue flame arising therefrom is not thicker than a lead pencil, and it need be little more than half an inch in height. A small spirit lamp, or a small paraffin lamp, such as is used as a night light, would answer, care being taken in this case that soot does not form and fall, with possible danger of causing fire. I have not the slightest doubt but that in place of the boiler a piece of any good heat-conducting metal, *e.g.*, copper, with a small lamp near each end would serve almost equally well, and it would be much cheaper. This I think will answer better than the tray of sand sometimes used in chicken incubators, because the heat would be more equally distributed.

The body of the incubator is simply a box without top or bottom, supported by four short, splayed legs sufficiently long to suit the height of the lamp from the table and allowing about an inch margin around the boiler when placed in its position inside and near the bottom of the box.

The boiler is supported by two stays nailed across the box so as to allow the slight rise before mentioned. An inch or two above the boiler or metal plate strips of wood are nailed along the inside of the incubator, to which is tacked a sheet of perforated zinc, which will form the bottom of the incubator. In this holes must be made to allow for the passage of the chimney and filling tube of the boiler. Three or four thin strips of wood may be tacked across the zinc to prevent it sagging. Over the zinc, with ends resting on the strips on the sides of the box, put three or four stays, which may be left movable. These are to support the hives in which you propose to incubate your bees. You have now completed your incubator, and with the exception of the boiler or copper plate and the perforated zinc you may perhaps have made it from a few boards, *e.g.*, old packing cases which you happened to have by you.

I have tried the use of the incubator as follows:—

1. Going to my hives I have placed a sheet of foundation near the middle of the brood nest of each. Nine or ten days later I found these as expected, full of sealed brood. These I placed in a body box, which I carried to the incubator and placed therein, having previously raised the temperature to 90 deg. F. Light quilts were placed over the frames. On the expected day, that is, in eleven or twelve days, about the twenty-first day from the laying of the egg, it was an interesting and delightful sight to see a number of fluffy little baby bees, and also many others eating their way out of their cells. Next day there were hundreds covering the combs. These were taken down and given back to the hives, as no stores had been provided for them in the incubator.

2. Combs were placed in the incubator containing not only sealed, but also unsealed, brood and stores. Nearly all the bees were shaken or brushed off the combs into the hives, some being allowed to remain on the combs in order that they might continue to feed the unsealed larvæ. They did so, and in some days all cells were sealed.

3. Having removed these last-mentioned combs from the incubator, when most of the brood had emerged, I carried the body box to a hive near swarming point, and took from this hive four combs of worker and drone brood, all of which were sealed except two queen cells. I took two other combs from this hive and gave to other hives, and filled up with six frames of foundation. I took also two combs of sealed cells from other hives and placed them in the incubator body, making six in all. I shook or brushed off from these six combs every bee. There were, of course, abundance of stores in these combs, including uncapped honey. On the following day I found that some bees had already escaped from their cells in the four combs mentioned above. On the next day there were hundreds of others. The following day I gave the comb containing a queen cell, but separated from the other combs by a dummy, so that I could observe the queen cell without removing the quilt from the six frames. I left things in this state for some five or six days. I then carried the hive body out to the apiary, and put all the combs into an empty hive. I have now a hive of bees, queen, drones and workers, every one of which have been hatched in the incubator, and not one of which has ever seen a bee older than itself. All evil traditions, therefore, have been broken, and, as I hope, all physical evil tendencies, whether of foul brood or of "Isle of Wight" disease, or of aught else has been avoided. The stock appears to be thriving.

I find in examining the newly-hatched bees in the incubator that if the combs are lifted out they do not fly on the first or second day.

On the third day some will fly as far as the windows or tables, but many will fall to the floor, where there is danger of their being trodden on. Probably on the following day many will be found crawling about the room; they are now weak, and probably many dead bees will be found. It is not well, therefore, to open the incubator if it contains bees more than two days old. I find that whereas on the third day bees that have escaped may be picked up with impunity, on the fourth day Nature has already taught them the use of their stings.

I have mentioned above the temperature of 90 deg. F., which appears to be very suitable. The incubator, however, may rise to a temperature of 100 deg. F. without apparently doing any harm, and it may fall as low as 80 deg. F. It would be well, however, to make sure that pure beeswax is used, which remains hard longer than other waxes frequently used in adulteration.

As to quilting, if it is intended to permit the young bees to hatch out in the incubator, one must remember that they are unable to secure the quilt to the frames by propolis, and, therefore, if the quilt is put on slightly creased it will give an opportunity to the inquisitive youngsters to run away from home, and the next day you will find them creeping and flying all over your room. Therefore, it will be well to put something rather heavy over your quilting, which may consist of calico or, better, stout linen, such as bed ticking covered with one or two thicknesses of felting, such as is placed under carpets, which is warm and porous. Over this I at first used the usual square of queen-excluder zinc. This, however, is rather too heavy, and crushes the bees; it also cools too quickly and robs the top of the hive of its warmth. A square of thin three-ply wood answers admirably. It is light and does not warp. Some small holes may be drilled through it to permit a ventilation.

A thermometer will be required. The most convenient form is that of the "bottle" or "chemical" thermometer. This is the same in form as the clinical thermometer used by doctors, about eight or ten inches long, and about three-eighths of an inch in diameter. It costs about 2s. 6d. The degrees are marked inside the glass or engraved thereon. A hole may be made in the quilting to allow the thermometer to pass between the combs.

By means of a cork borer and a bradawl, followed by a red-hot pipe stopper, the thermometer may be made to fit tightly into a cork, which should be passed down until 90 deg. is shown above the cork. It may then be allowed to stand in the incubator, and the temperature can be read without removing the quilt. The temperature of the incubator is not regulated by closing or opening the ventilator as in chicken incubation, but by regulating the height of the flame or by raising or lowering the lamp.

It is surprising what a very small flame suffices. As the brood attains maturity and animal heat begins to be generated, less and less artificial heat will be required to keep up the necessary temperature.

Thermometers such as I have described may be obtained registering 150 deg. F., but more commonly 212 deg. F., which is the boiling point of water. These show the 90 deg. F. sufficiently high to stand above the incubator. Others are marked up to 500 deg. F. These are unsuitable and more expensive, costing 5s. instead of 2s. 6d. J. S.

WEATHER REPORT.

WESTBOURNE, SUSSEX.

July, 1916.

Rainfall, .70 in.	Minimum on grass, 36, on 1st.
Below aver., 1.67 in.	Frosty nights, 0.
Heaviest fall, .37 on 6th.	Mean maximum, 66.7.
Rain fell on 8 days.	Mean minimum, 50.3.
Sunshine, 218.2 hrs.	Mean temperature, 58.5.
Below aver., 9.1 hrs.	Below average, 2.4.
Brightest day, 2nd, 14.2 hours.	Maximum barometer, 30.327, on 29th.
Sunless days, 1.	Minimum barometer, 29.515, on 7th.
Maximum temperature, 80, on 31st.	
Minimum temperature, 41, on 1st.	

L. B. BIRKETT.

EXCESSIVE SWARMING.

[9049] Two years back I bought five stocks of bees, one Italian, one Dutch, one hybrid, two English, one of which I requeened with an Italian queen. The first year they did very little, this year they have been almost a perfect nuisance; my five stocks have increased to sixteen, two other swarms got away and settled close by, one in a chimney, the other in a hole in a wall; and no doubt other swarms have gone, as my bees are in a quiet place, well away from where I live (over a mile).

I might say they are doing well as regards making honey; have taken five racks of sections, the first one May 28th. The honey was of beautiful colour and quality,

and sections well filled, and there are about fifteen more racks to come off.

I might say I bought five more frame hives, as I concluded they would swarm once; but now they have swarmed so much have had to put them into sugar-boxes—in fact, anything I could get: they are wonderfully healthy and pretty savage if you go near them. Being only a novice, perhaps you would be good enough to tell me why they swarm so; or, better still, if someone would volunteer to come and look them over for me, I should be glad.—HAMPSHIRE.

REPLY.—Both Italian and Dutch bees are prone to excessive swarming, especially in the hands of a novice. Without details of management, we cannot say where it was wrong. Possibly one of our readers near Basingstoke will undertake to look at our correspondent's bees and give him advice. Any letter addressed to "Hampshire," under cover to this office, will be forwarded.

Notices to Correspondents

REV. G. B. (Harrogate).—*Cleaning Hives.*—This is usually done in the spring. The best plan is to move the hive to one side and place a clean one in its place. Each comb should be lifted out of the hive, and all propolis, bits of burr comb, and wax be cleaned off before putting it in the clean hive. It is not necessary to shake the bees off the comb, or to fit all the frames with new foundation, but any old or faulty combs should be renewed.

"RADNORIAN" (Radnorshire).—*Queen Not Laying.*—(1) It is probably due to two causes, viz., the queen is aged and the season late. Better requeen as soon as possible. (2) A young queen will at times lay a number of drone eggs for a few days. Most likely there is too much drone comb. If so, take out two or three of the combs when packing up for winter, and give foundation in their place in the spring. You may possibly be able to get a couple renewed now.

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices (not exceeding 7 lines) in this column, 10 lines charged 3s. 6d., up to 15 lines 5s., which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

Cannock Horticultural Show, Saturday, Sept. 2nd. Eight Classes for Honey, &c., open to all. Good prizes offered. Jno. Bird, Secretary, 62, Allport-road, Cannock. **Entries close August 28th.**

Please note alteration of dates.

Special Prepaid Advertisements

Two Words One Penny, minimum Sixpence.
Will advertisers please read these Rules carefully in order to save trouble, as they will in future be strictly adhered to.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not permissible at above rate, but will be inserted at* 1d. *per word as* "**Business**" *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of* 3s. *per* ¼in., *or* 5s. *per inch.*

PRIVATE ADVERTISEMENTS are only intended for readers having **Surplus Stock** *to dispose of.* **Driven bees, Nuclei,** *and* **Queens that are reared or imported for sale,** *are Trade Advertisements, and can only be accepted under trade terms.*

Advertisements must reach us NOT LATER than FIRST POST on TUESDAY MORNING for insertion in the "Journal" the same week.

Orders for three or more consecutive insertions in "The Bee Journal" entitle advertisers to one insertion in "The Bee-Keepers' Record" free of charge.

PRIVATE ADVERTISEMENTS.

WANTED, a few cwts. of light English honey.—Sample and price to FISON, Rawdon, Leeds. v 53

WANTED, 5 cwt. honey for cash, good quality; sample, price.—BLACKMORE, Halthaies, Bradninch. v 47

SPLENDID light honey, 70s. per cwt., carriage forward; samples 3d.—A. LEE, Eastleigh, Bideford, N. Devon.

FOR SALE, or exchange, good Spaniel Dog Pup for White Leghorn Pullets or Turkeys.—H. SEAMARK, Willingham, Cambs.

WANTED, 2 cwt. honey in 28 pound tins, this season's.—SMITH, 8, Norlington-road, Leytonstone, Essex. v 49

WANTED, extracted honey in bulk.—State price and samples to E. HIRSEE, Pier-road, Littlehampton. v 48

TWO Stocks on 8 frames, 1916 queen; just right for heather; 30s. each; travelling box 2s. 6d. extra, returnable.—J. BOWDEN, 167, Ellerton-road, Tolworth, Surbiton.

WANTED, honey in sections and bulk, also geared extractor.—Quantity, price and sample to BOWDEN, 167, Ellerton-road, Tolworth, Surbiton. v 45

WANTED, clover honey, this season's, in 28lb. tins; send sample and lowest price per cwt.—HARRIS, Tobacconist, Congleton. v 44

HONEY wanted, up to cwt.; what price? samples.—OGILVIE, Delvine, Murthly. v 43

SURPLUS Hybrid Queens, fertile, 4s. each; three stocks kept, Dutch, Hybrid Dutch, and Goldens; travelling and introducing cage; above queens from Dutch stock.—BOOEN, Raydon, Ipswich. v 42

SEVERAL stocks of bees for sale, 10 frames, 1916 queens, guaranteed healthy, f.o.r., boxes returnable, £1; inspection invited.—OBORNE, 25, Guest-road, Bishopstoke, Hants. v 37

A FEW travelling crates, bottles, or sections, 2s. 6d. each; Porter escapes, slightly soiled; excluder zincs, also feeding bottles, with stages, all 1s. each; six strong telescopic hives, zinc roofs, 7s. 6d. each.—X. Y. Z., BEE JOURNAL, 23, Bedford-street, Strand, W.C.

FEW young native and hybrid queens, 5s. each; one 3-framed nuclei.—HUNT, Westmoors, Dorset. v 31

WANTED, extracted honey in bulk at 65s. cwt., delivered.—Samples to W. H. WYATT, Bishopswood, Chard, Somerset. v 29

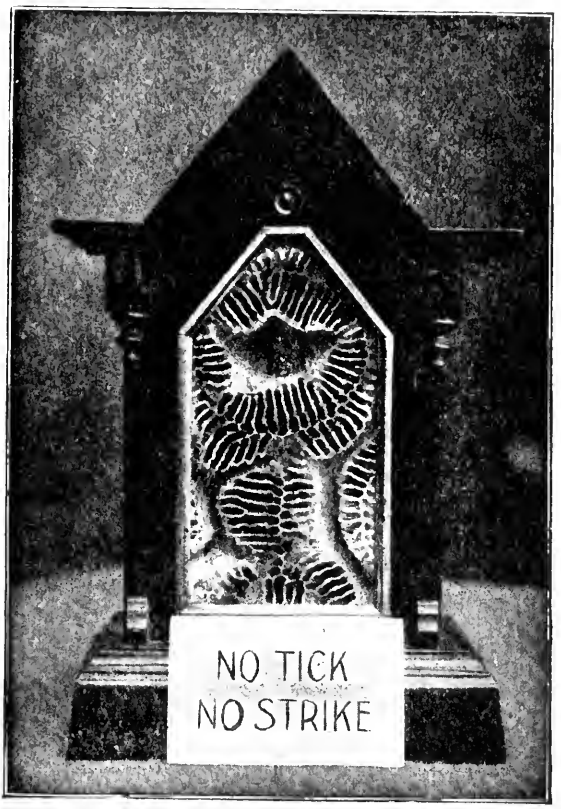
SEVERAL four framed nuclei, disease resisting, Italian and hybrid Italian queens, 1916, 15s. each.—SMALLWOOD, Finchley-lane, Hendon, N.W.

WANTED, for educational purposes, piece of comb containing foul brood.—BRITISH BEE JOURNAL Office, 23, Bedford-street, Strand, London, W.C.

FIVE frame nucleus for sale, swarm raised 1916 queen, Simmins' strain, 17s. 6d.—BARNES, Bourdon-road, Anerley. v 39

PHOTOGRAPH of Comb in clock-case from which 7 lbs. of Honey was extracted. Seventy pounds were abstracted from the hive also. These Bees were badly affected by "Isle of Wight" Disease and treated by M. C. Pay of Croydon, and cured by IZAL washing, spraying and Izalized food. He had the hive given to him to be destroyed, May 24th, 1912, on which day he began his treatment.

"In IZAL they had placed in their hands a worthy and formidable weapon for battling against the bacillus."—*Sir James Crichton-Browne, F.R.S.*



By Appointment.

2 Teaspoonfuls Izal Fluid to 1 gallon of water for washing and spraying New Queen Bee inserted on June 12th 1912.

In September 77 lbs. Honey taken from them. At present, June, 1915, descendants of the original diseased bees are quite healthy.

IZAL

is a Reliable Remedy against Foul Brood.

Sold Everywhere in Bottles, **6d.** & **1/-** each.

Ask for full details of IZAL treatment sent post free by

Newton, Chambers & Co., Ltd., Thorncliffe, nr. Sheffield.

Editorial

THE PRICE OF HONEY.

One of our correspondents suggests that we should give our readers some idea as to the present price of honey. This we can only do in a general way, as prices will vary in different localities. At the present time good quality foreign honey is realising almost as much per ton as our home produced did before the war, and taking into account, also, the high price of sugar, and that from various causes our honey crop will only, generally speaking, be a moderate one, English honey should command a good price. Extracted honey, first quality, should make from 75s. to 80s. per cwt. in bulk, and retail at 1s. 3d. to 1s. 6d. per 1-lb. jar; second quality, 60s. to 70s. per cwt. in bulk, and retail at 1s. to 1s. 2d. per 1-lb. jar.

Sections, well-filled, first quality, from 12s. per doz. unglazed, wholesale, and 1s. 4d. to 1s. 6d. each retail; second quality, from 10s. per doz. unglazed, wholesale, and from 1s. to 1s. 2d. each retail. Heather honey should make about 33 per cent. above these prices. These prices are only approximate, and as good sections will probably be scarce higher prices than those given may possibly be obtained.

We shall be pleased to hear from readers what prices are ruling in different parts of the country, and publish them from time to time.

MR. WALTER F. REID.

We have great pleasure in reprinting the following appreciation of Mr. W. F. Reid, the Vice-Chairman of the B.B.K.A., from the *World's Work*. Mr. Reid is an extremely modest man, and no doubt most of our readers will be surprised to read of the variety of his accomplishments, and we question whether many of the members of the Council of the B.B.K.A., over which Mr. Reid so ably presides, are aware of the important work he has done, and is still doing, for his services are in great request by the Government at the present time. This article will give some idea of the strenuous life Mr. Reid has led:—

"Mr. Walter F. Reid, of Addlestone, Surrey, is one of those men whom the experts recognise at once, whom the chief authorities in a wide range of commercial, scientific, and international subjects put down as 'the man who knows' in their own departments of labour, but whose name seldom comes before the general public.

It is probable that few men in England have had such an adventurous or diversified career in their work, sports, hobbies, and interests as this quiet, tall, dignified and youthful-looking man, just turned sixty.

He is a native of Berkshire, and was born near Bearwood, the seat of John Walter, of the *Times;* indeed, that celebrity was his godfather. After studying in England young Reid was sent to Germany, to the universities of Heidelberg and Berlin, and he took honours in several scientific subjects, becoming a graduate of the Royal School of Mines in Berlin.

As a youthful resident in Berlin during the Franco-Prussian War, the subject

MR. W. F. REID, F.I.C., F.C.S.

of this sketch played his part, attaching himself to what would to-day be called 'The Red Cross Society,' and helping to care for the wounded. After his return to England Mr. Reid studied civil engineering under his father, and in due course took up that work with such success that he built the present Earl's Court Station, under the great civil engineer, Sir J. Wolfe Barry, and also several railways and other works of note.

Then he began to specialise in building factories for the manufacture of explosives, cement, and various chemical industries, substances he had studied during his science work, and so could bring to such building a mind trained, inventive, observant, such as one seldom finds in those who have to design and erect such factories. He was extremely successful, and these industries in this country owe no small debt to him to-day for what they now are.

In the course of Mr. Reid's work as

an expert he had to visit the Argentine, and his adventures there, in hitherto little-known forests, plains, and wild regions, would be sufficient to fill a volume with exciting records. Thrice he nearly lost his life; he was received by and dined with the late Emperor of Brazil, Dom Pedro, and was one of the few outsiders who had then investigated the 'rubber' industry on the spot. But this stirring tale of three years' adventures in South America is not to be told here.

On Mr. Reid's return to England he took charge of the then not very successful explosive works at Stowmarket, where he had been called in to give expert advice. He became the chief chemist and works-manager there, and invented the famous E.C. 'smokeless powder.' It is true that indifferent gun-cotton powders had been tried before, but they had proved unsatisfactory and far from what was really wanted and expected.

Mr. Reid's invention of the gelatinisation process for smokeless powder began a new era in explosives, and all propulsive powders used in present war are made by it. His experiments and improvements with gun-cotton, in relation to its use for manufacturing explosives, added immensely to his already high reputation amongst the cognoscenti.

Not only explosives, but also aeronautics, have fascinated him, and greatly engaged his attention and his inventive genius. He has studied the Zeppelins from their beginning, and has had exceptional opportunities of examining them in Germany. So Mr. Reid knew what he was talking about when, in a lecture at the United Service Institution, as far back as 1911, he told an audience of scientific people that no dirigible could stand against aeroplanes armed in the way he then specified.

The late Sir Andrew Noble—the celebrated Newcastle armament authority—came from that northern city specially to take the chair, despite his age, in order to show his friendship and appreciation of Mr. Reid. And these were Mr. Reid's words the gun-maker then applauded:—

'With a self-opening tin, half a pint of petrol, and a box of safety matches any aeroplanist can improvise a projectile that would put an end to a Zeppelin in a few minutes! Strong acids that would rapidly destroy the dirigible's fabric would cause a certain, but less sudden, collapse!'

And Mr. Reid maintains to-day that fire and acid is the proper and most sure way of destroying Zeppelins, far better than the anti-aircraft guns now being used here, which are as dangerous to friends as to enemies.

This versatile and adaptable man was one of the first directors of the National Physical Laboratory; he was also appointed one of the British jurors for several famous exhibitions abroad, such as those at St. Louis, Turin, and Brussels. He was thrice offered the Legion of Honour by the French Government, and he was one of the Plenipotentiaries for Great Britain at the International Convention on Exhibitions in Berlin, 1912.

In recent years Mr. Reid has devoted much attention to agriculture and horticulture; he won the gold medal of the R.H.S. for being first in the 1st class at its examinations in 1894. He has gone deeply into the question of bee-keeping and its effects on fertilising crops and fruit trees, and has made some unique, striking, and clever experiments to show what a powerful influence the work of the bees exerts in this direction. Indeed, Mr. Reid has been for some years Vice-Chairman of the British Bee-Keepers' Association.

Even the above do not include half the surprising varieties of wonderful work done by this noteworthy man. He has studied and written much on the utilisation of waste rubber, on the manufacture of linoleum, on the question of coal smoke abatement in large towns; on patents, and the unpatriotic way the Board of Trade deals with patent-holders.

He is Chairman of the Institute of Inventors, Vice-President of the Society of Chemical Industry, a Fellow of the Institute of Chemistry; a Fellow of the Royal Society of Arts, and of probably a round dozen other similar well-known scientific and technical societies! He is a director of two successful Companies and a Fellow of the Institute of Directors.

The hours of work such a man puts in daily would make the mill-hand of a Lancashire cotton factory blush for shame that he ever imagined 'a working day' meant ten hours, let alone eight. For Mr. Walter Reid it usually means about eighteen!"

RANDOM JOTTINGS.

FACTS VERSUS IMAGINATION RESPECTING "ISLE OF WIGHT" DISEASE.

By Charles H. Heap, Reading.

The correspondence in the BEE JOURNAL shows that "Isle of Wight" disease is rightly still the uppermost thought in bee-keepers' minds, but the tangle of ideas seems as far from being straightened out as ever. The best contribution which has appeared for a long time is that of "Native," printed in the issue of June 29th, and it is the best because he did two

sensible things before he began writing. (1) He got the supplements to the *Board of Agriculture Journal*, published in 1912 and 1913, and (2) he studied them. Many correspondents write without knowledge of the subject, and not a few of the bee-keepers who have read the reports issued by the Board of Agriculture have either failed to understand the facts here set forth or they imagine that their own ideas, based on ignorance and credulity, are superior to the actual findings of people who have been studying such subjects all their working lives.

The assertion is still being made that Italians are more resistant to the disease than native bees, but not the slightest evidence, that cannot be equally well applied to other varieties, is offered on their behalf in proof of the alleged fact. During the time I acted as a bee expert, I toured six counties and examined thousands of stocks of bees; but my experience does not bear out the claims of the admirers of Italians. I found that Italians suffered as badly as black bees, and my observations are borne out by the microscopical examinations made by the scientists who carried out the investigation of the disease for the Board of Agriculture.

Two or three years ago I visited a somewhat isolated district in Scotland, in which three apiaries were situated. In two I found "Isle of Wight" disease, but in the third, which lay between the others, I saw no sign of the disease. The previous year an expert, who is an admirer of Italians, had been lecturing in the neighbourhood, and upon his advice the owners of the three apiaries in question imported queens direct from Italy, where, by the way, "Isle of Wight" disease is known as *Mal de Maggio*. In two apiaries the Italian queens were introduced successfully, but in the other the Italian queen was killed, and a black queen still reigned. I do not say that the disease did not exist in this apiary—it was impossible in the circumstances to tell—but at any rate there was not the slightest sign of it. As I was not in a position to make a full investigation, I cannot say positively that the disease was imported into this district—a promontory on the south-west coast—direct from Italy, but the facts seem to point in that direction.

An unfortunate fact in this controversy is that the beekeeper who expounds his ideas so confidently has generally no knowledge of scientific methods of research. Consequently his observations do not cover a sufficiently long period, and he leaves out of his reckoning various factors which have an important bearing on the subject under investigation. The scientific investigator, on the other hand, takes the most minute precautions to eliminate errors, and tests his results in various ways. The surest way to discover whether a particular variety of the honey bee can withstand the ravages of *Nosema apis* is to feed to a colony vital spores of the organisms, and await patiently the result. Do not expect the bees to show signs of the disease at once and to die out before a new figure is written on the top of the calendar. I will undertake to say that if certain varieties of bees, for which so much is claimed, were to be put to this test no breeder or importer of bees—whether you call them Banats, Carniolan, Cyprian, Dutch, English, Italian, Punics, Syrian, golden or what you like—would give a guarantee that they would survive the experiment. How can the pigmentation of the chitine of the bee, I have asked over and over again, affect the constitution of the cells of the animal's stomach and intestines? The colour, so far as we know, is the main, if, indeed, it is not the only physical difference between the Italian and the native variety of *Apis mellifica*.

People are constantly writing and talking about the production of an immune strain of bees, but though they have had ten years in which to produce one the first step towards it has yet to be taken. Indeed, no one seems to know how to set about the business. I have before to-day pointed out how difficult the subject of immunity to disease is, and in the case of the honey bee it is specially difficult. Because a colony here and there in a disease-stricken area is not infected, or when infected dies out slowly, some people think that the bees have resisted the disease. That individuals escape by sheer good luck is the case in all epidemics, whether affecting insects or animals higher in the scale of creation. I once knew a clergyman who had proved immune to cowpox and smallpox, but who can name a variety of the human family immune to smallpox, and, let me add, tuberculosis? What variety of dog exists which cannot be infected with rabies? Where is there a herd of cattle, domesticated or wild, capable of resisting the anthrax bacillus? When satisfactory answers are given to these questions it will be time to talk about immune bees. There are also people who imagine that *Nosema apis* is going to change its character to suit bee-keepers. In his article on pages 184-5, Mr. Smallwood asks, alluding to descriptions of disease by ancient writers, "Is it, then, that in recurring cycles of years these outbreaks occur, wax, wane and have their end?" This is a nice-sounding but indefinite sentence. I should especially like to know what he means by "end," used in

this connection. Obviously if the diseases that existed in the time of Aristæus exist to-day, they have had no end in the sense of having at some time become extinct. The sentence in which Mr. Smallwood appears to answer the question is equally vague: "Judging from the present outbreak of 'Isle of Wight' disease it would seem like it." Then, because he has seen few cases of the microsporidiosis in the south this spring Mr. Smallwood jumps to the conclusion that the epidemic has exhausted itself; and he adds, with a touch of triumph, "The fittest have survived." I want to cry "Fudge!" The virulence of *Nosema apis* has not diminished; what is happening is that its hosts are becoming scarce. If I were Mr. Smallwood I should not be in such a hurry (inferentially) to pronounce the stocks he saw free from disease. How can he or anybody else tell that a stock is free from disease, unless he kills every bee in the colony and examines it microscopically? I think I am safe in asserting that neither "Isle of Wight" nor any other disease ever dies out so long as the organism which produces the disease is able to find a host.

I think it is a great pity that there is so much loose thought, writing and talking on this subject, and unwise advocacy of beekeeping by associations, as well as by individuals, because it is all highly misleading and delays indefinitely the great effort that will be needed to get rid of the disease, and to bring about a revival of the industry.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

ANCIENT BEE LITERATURE.

[9301] I have been following with great pleasure the papers on "Ancient Bee Literature" that have lately been appearing in the JOURNAL. Perhaps the writer will allow me to point out to him that the quotation he makes on page 241 is not from Ecclesiastes, but from one of the apocryphal books of the Bible called "The Wisdom of Jesus, the son of Sirach, or Ecclesiasticus." In an old Bible (1776) it reads, "The bee is little among such as fly, but her fruit is the chief of sweet things," and it is quoted thus by some old bee authors, Butler and Purchas amongst the number.—W. M. M.

INCUBATION OF BEES.

(9300, *August* 10.)

[9302] Many numerous and costly experiments have been conducted in this direction for many years past. They are both destructive and harmful—harmful if applied before warm weather is near at hand, and greatly helpful if applied in a proper manner. Paraffin stoves, lamps, green-houses and coal-stoves have all been brought into use, and in the light of past results have all been condemned.

In "A Modern Bee Farm" it there tells one how to make an incubator or nursery, and, I believe, as far back as the early days of the Egyptians they had some means of similar process. At present the writer believes there is nothing better than "Nature's Laws" in incubating.—EXPERIENTIA DOCET.

DETERMINATION OF THE SEX OF EGGS.

[9303] Nearly, if not quite, two years ago, your valued correspondent, G. G. Desmond, put a request, or rather a query in the B.B.J. as to whether the sex of eggs was really determined by the cell in which the queen laid, or whether the queen had that power invested in herself—your correspondent invited observation and subsequent reports. As I have not yet seen any report appear, therefore I send you mine, hoping it will lead to others sending theirs. (1) Early in the spring of 1915 I inserted a frame of foundation in the centre of a strong colony in the morning. The next morning, on examining it, I found that though the bees had only just commenced to draw it out, the queen had deposited about 20 to 30 eggs on either side, which eventually hatched workers. (2) The same year, many times I had pieces of comb built in straw skeps, and in each case before there was anything save the foundation of cells, yet the queens had deposited eggs.

This year I have had a queen nearly cover a frame of drone base foundation with eggs, and the bees were only in the act of heating it to draw it out. They all hatched drones. Judging from this I cannot think otherwise but that the queen has the power of selection, and it is not the cell pressure which determines the issue. We cannot imagine a queen depositing

eggs indiscriminately, and when she deposits them on cell bases she must have the sense of sight or feeling to determine if it is drone or worker, and so deposit accordingly. Of course my observations have not been in any way exhaustive, but may, with others, help to arrive at a conclusion.—R. LITMAN.

THE BLIND LEADING THE BLIND.

[9304] The Rev. A. H. Hollis has contributed two articles on Dioxogen and "Isle of Wight" disease; but I hope no one will waste any time or money in following his advice. To begin with he confessed that he is only a last year's novice, and in the issue of July 27th he displays absolute ignorance of the subject on which he attempts to instruct other people. I may as well correct a few of Mr. Hollis's most glaring errors. First of all, "Isle of Wight" disease is not caused by a bacillus. A protozoon is responsible for the mischief. The protozoon makes its home not outside but inside the bee. It may be due to my ignorance, but I was unaware that there is mucus in the air passages of insects. Whether there is or is not the spiracles are not the seat of the disease, but the chyle stomach, and intestines. The disease-producing organisms do not merely lie in the passage of the gut, but creep into and between the cells of which it is composed. Sometimes they get into the hæmocœlic fluid. How is this wonderful Dioxogen going to reach them there? If Mr. Hollis's stock of bees had "Isle of Wight" disease in the spring it has it still, as he will discover before this time next year.—CHARLES H. HEAP, Reading.

PROLIFIC STOCKS.

[9305] Seeing in the JOURNAL an account of a prolific stock, it occurred to me that my experience might be of interest.

I started—or rather re-started—last back-end with a driven lot of bees and fed them up.

In the early spring of this year I almost gave them up, they had dwindled to so few. I however fed again, and had the satisfaction of seeing them gradually increase in numbers.

I supered early, and soon added a further one. They were quickly taken to by the bees and very soon the combs were thickly covered with them. I use glass "quilts," and can daily watch the progress made. It was simply wonderful the strides made day by day. I should have liked to divide, as I wanted increase, I could not make up my mind, so decided to leave it to the bees.

At the end of May they threw off a fine swarm. These I fed at once. I now hoped for a cast. This came off in good time. I hived them, and noticing the queen was injured, was not surprised to find the bees, or the majority of them, had returned to the old stock. I found on the alighting board the queen and about two handfuls of bees. I decided to form a nucleus. I gave them a comb of brood, bees and queen cell from the old stock. They went ahead at once.

The cast came off again with another queen about two days after. I had now four lots from one, and naturally thought this was the end of the swarming for the year.

The first swarm went forward with leaps and bounds. I put on two lifts of shallow combs. They practically filled one and swarmed. The old queen was lost in the operation, for the bees after hiving themselves in an awkward position, returned to the hive. They repeated this on two further occasions. The last time a few of the bees remained in the skep after hiving, and as my previous nucleus had been such a success I decided to form another. I took out a comb with queen-cell, brood and bees and hived the small lot on this. I hoped now for a further swarm as soon as a queen was ready. You see, Mr. Editor, I had been led on to expect almost anything. I was not disappointed. I had a beauty two days after making No. 6.

To bring matters up to date they stand as follows:—

No. 1. The old stock. I have taken one super off, another is practically ready. They have also two racks of sections on. Also gave me two swarms and a nucleus.

No. 2. The first swarm. Gave me a swarm, a nucleus, one rack of shallow combs; two others are on, practically ready.

No. 3. The first nucleus. Filled the bottom box from foundation and are now working fine on a super of shallow combs.

No. 4. Cast from old stock. A super almost ready (shallow combs).

No. 5. Nucleus from the swarm. On seven frames, and doing well.

No. 6. Swarm from the first swarm. Filled eight combs after drawing out from foundation. I have added the remaining two to complete. Only 10 days old.

Three years ago I was cleared out by the "Isle of Wight" disease. My experience this year is as pleasing as my previous was distressing.

I have never seen such queens as I

possess. I have on several occasions found brood right through the hive, the combs being a mass right to the top bar and the sides. They have even reared brood close to the glass quilt, and one could actually see the larvæ going through the different stages, the glass being used as one side of the cells.

I have now young queens in all hives, all but the last nucleus are full of bees, and the brood chambers are packed with brood. The last nucleus bids fair to be equally strong.

I have missed out a great deal of what would have been interesting detail, but I think I have already trespassed on your space sufficiently.

My good fortune almost lead me to go into the matter of next year's hopes, etc. I will "wait and see" what is in store.

If I get a cwt. of honey together with six stocks from one driven lot, have I created a record?—W. Parsons.

[Can any of our readers beat this? We congratulate our correspondent on his success, and shall be pleased to hear "if" he secures that cwt. of honey.—Eds.]

PROLIFIC STOCKS.

[9306] I see occasionally letters in the B.B.J. (of which I am a regular reader) giving accounts of the doings of particular hives, etc. This is interesting and should be instructive; perhaps you could find space to insert this letter in your paper, as I consider it very encouraging to a town beekeeper.

I had a stock of nearly, if not quite, pure Italians last year, which wintered well, and on May 1st, this year, I put on one box of shallow combs, later adding others. The bees swarmed a week or two ago, and after about a quarter of an hour's absence in a pear tree a few yards away they returned to their hive, then in a few days they swarmed out again, and I put them on 12 frames, which they well covered. Now, to-day, July 30th, the original stock has sent out a cast which has been put on 10 frames—fully covered. I have stood the old stock on one side, and put this cast in its place, adding one box of shallow combs. Now this original stock, besides producing all these bees, as above stated, has filled three boxes of shallow combs, roughly one hundredweight of honey. Is not this very remarkable for Hither Green—just on the edge of London? This race of bee seems admirable in almost every way, except that I find some of my stocks, which have not done quite so well as above, seem very much inclined to swarm; in fact, this particular hive I found to-day contained about 20 queen cells.—W. C.

WIRE QUEEN EXCLUDERS.

[9307] In reference to the letter from Mr. W. J. Sheppard, Nelson, B.C., I may say I had three Wilkes excluders from one of our leading appliance dealers a short time ago, and found them totally useless, as the queen was able to pass through them at will.

The idea is good, but, in my opinion, to be successful the wires should be far stiffer, and the cross pieces with clips much closer together. In the "Wilkes" (I have one before me now) the wire is far too soft, and therefore it is almost impossible to keep the distance accurate.

I am sure that the wire excluder is a great improvement, but is useless unless better made.—R. B. Manley.

DIOXOGEN AND "ISLE OF WIGHT" DISEASE.

[9308] Seeing the Rev. A. H. Hollis' cure of his bees, I at once tried the same on my bees, having lost 45 stocks through this pest. I opened the hive early in the morning (14-frame hive), used 1 in 6 of Dioxogen, sprayed all frames, bees, also sides, ends and bottom of the hive so that it ran out at the entrance—this was done with warm water so as not to chill the brood. I covered up quickly and left till next day: there were no crawlers about, and the third day they were working hard carrying pollen in. Up to the present I have seen no signs of the disease returning. Many thanks to Rev. Hollis. I only wish it had come sooner before I lost my lot. I may say Dioxogen is the same as peroxide of hydrogen, which will do, and is much cheaper.—W. Mountney, Expert, Southwell, Notts.

ECHOES FROM THE HIVES.

You will perhaps remember I sent up to you early in May a piece of comb, and a few days afterwards some bees which you informed me were attacked with "Isle of Wight" disease. Our local expert has since examined the hive from which these were taken and says there is no "Isle of Wight" disease, but the queen was a drone breeder. He found the combs so closely packed together that the bees could not get between to feed the brood; he has re-queened this stock and added a small swarm and they are now doing well; the same beekeeper also has nine other strong, healthy stocks.

As we have had numerous enquiries as to "Isle of Wight" disease in this district, I shall be much obliged if you will

mention in the JOURNAL that we are practically free from it: we only know of one isolated case at the present time here.

I am pleased to say the heather promises very well indeed if only the weather holds out.—L. H. SMALES. Arundel House, Whitby, Yorks.

TO STOP ROBBING.

The following method has never failed to stop robbing for me. Lay two boards across the top of the hive, with the ends projecting about 2ft. in front. Over this spread a blanket or old carpet. The carpet is fastened tight against the sides and back of the hive, leaving a dark space in front. Since all possible light is shut out from in front the robbers are unable to find their way to the entrance of the hive readily, while the bees which belong there will go in without trouble.—J. N. MORRIS, in the *American Bee Journal*.

F. C. PAGE (Kettering).—*Transferring Bees from a Small Box.*—Under the circumstances your best plan will be to "drive" the bees from the box, cut out the comb, and tie as much of that containing brood as possible into standard frames. Place in a frame hive, making up the number required with frames fitted with foundation. Run the bees into the hive, treating them just as you would a swarm, and feed. The transferring of the comb should be done in a warm room, and as the combs will be more or less rough, when packing for winter they should be placed on the outside of the new combs and renewed next year.

G. H. L. (Westmorland).—*Using Honey for Feeding.*—Add a little water, the quantity will depend on the consistency of the honey, enough to make it about the same as sugar syrup for autumn feeding. It will be safer to boil it.

J. GARTSIDE (Merkland).—Any chemist should be able to get it for you. It is stocked by Boots' Drug Stores. Add half teaspoonful to 10lb. honey.

ROSE (Kent).—(1) It is quite right to allow the space. You may make the sides 19in., and let the strips D in as you suggest, but you will find in working that the outer case will not slide over so comfortably. (2) Address to The Secretary, the Horticultural College, Swanley, Kent.

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices (not exceeding 7 lines) in this column, 10 lines charged 3s. 6d., up to 15 lines 5s., which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

Cannock Horticultural Show, Saturday, Sept. 2nd. Eight Classes for Honey, &c., open to all. Good prizes offered. Jno. Bird, Secretary, 62, Allport-road, Cannock. **Entries close August 28th.**

Please note alteration of dates.

Special Prepaid Advertisements

Two Words One Penny, minimum Sixpence.

Will advertisers please read these Rules carefully in order to save trouble, as they will in future be strictly adhered to.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not permissible at above rate, but will be inserted at* 1d. *per word as* **"Business"** *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of 3s. per ½in., or 5s. per inch.*

PRIVATE ADVERTISEMENTS are only intended for readers having **Surplus Stock** *to dispose of.* **Driven bees, Nuclei,** *and* **Queens that are reared or imported for sale,** *are Trade Advertisements, and can only be accepted under trade terms.*

Advertisements must reach us NOT LATER than FIRST POST on TUESDAY MORNING for insertion in the "Journal" the same week.

Orders for three or more consecutive insertions in "The Bee Journal" entitle advertisers to one insertion in "The Bee-Keepers' Record" free of charge.

PRIVATE ADVERTISEMENTS.

SURPLUS pure Italian Fertile Queens, 5s. each; one quality, the best; honey, in bulk or bottle; two stocks of pure Italian bees, 1916 queens, wired frames, stocked with honey, 35s. each, f.o.r.—No. 3 APIARY, Burton Latimer, Northants. v 63

NUCLEUS in hive, 12s. 6d.; queen, 4s.; driven stock, 5s.—GRACE HANNAM, Kington, Worcester. v 62

FOR SALE, first quality sections, 12s. per doz. —F. COUSINS, Misterton. v 57

WANTED, honey, in bulk, about 2cwt., this season's; send sample and price.—ELDER, chemist, Prenton, Birkenhead. v 61

FINEST English honey, 80s. per cwt.; sample, 2d.—DUTTON, Terling, Essex. v 59

WILL exchange pure bred English rabbits for honey ripener, extractor, bees, or appliances.—NEWPORT LODGE, Melton Mowbray. v 65

FOR SALE, guaranteed pure English honey, this season's, 70s. per cwt., free on rail; sample, 3d.—LAW, Cuckoo, Ashwell, Herts. v 67

HONEY WANTED, extracted and sections; state price, with sample.—E. BOOBIER, Old Babell, Swansea. v 66

WANTED, extracted honey, in bulk—State quantity, price, and send sample to CLARK, 4, Leyburn-road, Dover. v 64

WANTED, two or three driven lots first week in September.—Write, L. KETTLE, Stamford. v 56

WANTED, bee books, secondhand; quote price, author, edition, and year published.—G. S. OETTLE, Box 5555, Johannesburg, South Africa. v 22

WANTED, stock bees; exchange canaries to value.—BELL, 21, Beaufoy-road, Tottenham. v 60

WANTED, few pounds driven bees; price.—HUTCHINSON, Sydney-street, Stockton-on-Tees. v 58

WANTED, a few cwts. of light English honey.—Sample and price to FISON, Rawdon, Leeds. v 53

FOR SALE, or exchange, good Spaniel Dog Pup for White Leghorn Pullets or Turkeys. —H. SEAMARK, Willingham, Cambs. v 50

PRICE OF HONEY.

In response to our request for prices of honey we have received the following letter from Mr. D. E. Bonyonni, Letterston, Pembrokeshire:—

RE PRICE OF HONEY (*p.* 256, *August* 17 *issue*).

I am sending you my price list and advertisement in "Fishguard Echo," and those are the prices, retail, that I am getting; but what we have to contend with here is the non-existence of a Beekeepers' Association. I have suggested the formation of such an Association to several beekeepers in the county, but the breaking out of the war in 1914 stopped any progress.

I find it a great hindrance (and oftentimes a nuisance) that we are shut out of the B.K.A. As for the "Isle of Wight" disease—it has practically wiped out the stocks of all small beekeepers wholesale in this county. I, myself, lost 16 stocks last year; but still, with perseverance and research work, I have managed to pull through.

I have tried nearly all of the so-called cures during the past five years, but I find that they simply "arrest" for a season, or so, the disease, but not exterminate it.

As for *immune* bees—Italians, etc. I have found that they are not free from the complaint.

My black bees have done very well this year, and so have my hybrids; but the three Italians had a bad attack of *Mal de Mai* in July, while all the others escaped.

The price list is:—Per 1lb. in screw-capped glass jars, 1s. 6d.; 4lb. in plain glass jars, 5s.; 7lb. in tins, at 8s.; 14lb. in tins, 15s., or per cwt., £5, carriage paid.

"THE COMMONWEALTH OF BEES."

—HENRY V., Act I., Sc. 1.

"Therefore doth heaven divide
The state of man in diverse functions,
Setting endeavour in continual motion;
To which is fixed as an aim or butt,
Obedience: for so work the honey-bees,
Creatures that by a rule in nature teach
The act of order to a peopled kingdom.
They have a king and officers of sorts;
Where some, like magistrates, correct at home,
Others, like merchants, venture trade abroad,
Others, like soldiers, armed in their stings,
Make boot upon the summer's velvet buds,
Which pillage they with merry march bring home
To the tent-royal of their emperor;
Who, busied in his majesty, surveys
The singing masons building roofs of gold,
The civil citizens kneading up the honey,
The poor mechanic porters crowding in
Their heavy burdens at his narrow gate,
The sad-eyed justice, with his surly hum,
Delivering o'er to executors pale
The lazy yawning drone."

This passage is, I suppose, well known to many readers. Yet, I wonder if Shakespeare, when writing the lines, had even the remotest idea that a time would come when his words would give a perfect description of his own native land. This is the state of affairs at present. How perfectly do the lines fit in with the happenings of to-day. We have, taking part in this, the greatest War the world has ever known, the King and his officers of sorts, the magistrates, in fact, all the degrees of life which Shakespeare mentions. We have the soldiers, making boot, not altogether on the summer's velvet bud, but upon the Hun's proud prestige and boasts that he is the Master of the World, and we trust that some day they will bring home with merry march the pillage in the form of a lasting peace and fruitful victory. The singing masons and civil citizens are building up for us roofs of gold and kneading the honey, as they work with apparently tireless energy in their efforts to keep our brave soldiery well supplied with the sinews of war. We can also compare the "poor mechanic porters" to those who can neither fight nor make shells, yet who are doing their utmost to win the War by keeping our Exchequer well supplied with money to help pay off the enormous debts, which must of necessity be incurred in such an enormous conflict. After all these comparisons have been made, it is with great regret that I have yet one more comparison to make. We have the sad-eyed justice, it is true, but, at the same time, that worthy would have an extremely easy time but for the fact that we have a few "lazy, yawning drones" who try to exempt themselves from doing their bit by hiding under various cloaks. But even they must be treated as they deserve, and if necessary, handed over to "executors" or, as we would say at the present time, executioners before this noble England of ours can compare exactly with Shakespeare's Commonwealth of Bees.

J. V. PRICE, R.A.M.C.

HELPFUL HINTS FOR NOVICES.

By W. Herrod-Hempsall.

QUEEN-REARING AND INTRODUCTION.

(*Continued from page 251.*)

In sending queens to countries so far away that several days will be occupied in travelling, construct a cage which will hold a section of honey, provide plenty of ventilation, and put in about 200 bees. A good illustration of the necessary requirements is seen at Fig. 95; it is a combination of cages, in which I received five Caucasian queens from Russia. Upon arrival, not a single bee was dead.

In attempting to catch a young queen on the comb, sometimes she will fly. When this happens, stand perfectly still, take the quilt off the hive, and hold a comb in the hands. The excitement and consequent noise of the flying bees and those in the hive will attract her, and she will settle either into the hive or on the comb held outside.

The bees of a queenless stock will sometimes fetch an egg from another stock and rear a queen. Fig. 96 shows such a cell in a stock of mine that had been queenless

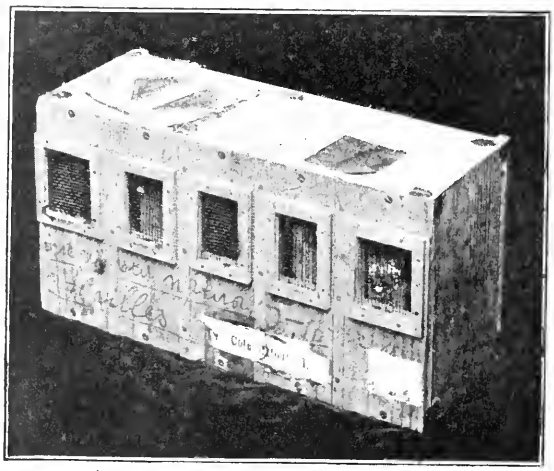


FIG. 95.

and broodless for three weeks. The resultant queen proved an excellent mother. Under certain conditions workers will also carry fertilised eggs and place them in worker cells. I once forgot to release an Italian queen caged on a black stock, where she remained for a month. When I found the omission, although she was still caged, the combs were full of brood and a large quantity of young Italian bees were running about on the combs, proving conclusively that not only had the bees fed the queen, but that she had laid through the perforated zinc, and these eggs had been carried and deposited in the cells by the workers.

When dealing with queens, the want of a third hand to hold them while completing some other work is often felt. In such a case she can be held by the thorax between the lips, as seen at Fig. 97. There is no fear of her stinging.

The cardinal points to remember in introducing queens are:—(1) Be sure the colony is queenless. (2) If it has been queenless for a long time, or a laying worker

is present, cage the queen on a comb of unsealed brood from another hive. (3) Don't examine for at least four days after the queen has been released. (4) Always put workers with the queen in the cage, except in the case of balling. (5) Cage the queen on food in the case of cages which are pushed into the comb, and see there is plenty of food in such cages as shown at Nos. 1, 3, 5, 7 and 12, Fig. 84 (6) Introduce only queens that have been properly tested. (7) If a stock has been queenless for a long

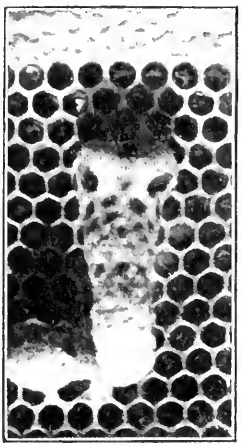


FIG. 96.

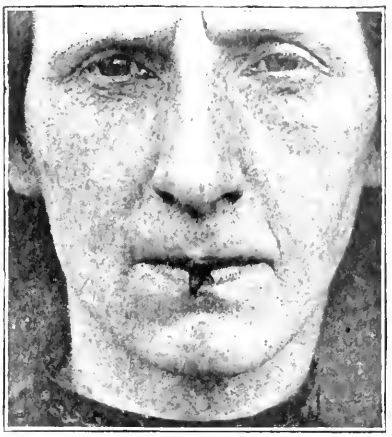


FIG. 97.

time, keep the queen caged for forty-eight hours; if only for a short period, twelve hours will suffice. (8) A stock should be queenless for at least twenty-four hours before introducing another fertile queen; three days if a virgin more than a few hours old. (9) The attendant workers should be young ones, which are distinguished by their silver grey fluffy appearance. (10) To avoid infection, never use an old queen cage, unless it be a metal one that can be disinfected, and use sterilised food.

CORRESPONDENCE.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

PEA FLOUR AND "ISLE OF WIGHT" DISEASE.

[9309] It is some time since that I advocated in your Journal the spraying of bees suffering from "Isle of Wight" disease with Izal—to find it, as far as my experience has proved, useless.

I am writing to report a marvellous return to health and activity of a diseased lot by sprinkling the bees with Pea Flour, as was suggested a short time ago in your columns. The effect seems quite wonderful: there is not a crawler, or wriggler, to be seen now. When the days were very hot, the bees simply clustered and crawled around the hive in great numbers, but on these last two hot days nothing of these antics are to be seen.

I have also placed boards up from the ground to the alighting board to enable the bees that could not fly to crawl up home, and this has resulted in the saving of many bees from dying from chill. The clusters, having all dispersed and got home in to the hive, have thrown off the disease.

They are working well in the sections now, and the body of the hive is full of bees. HERBERT NEWMAN.

THE BLIND LEADING THE BLIND.

[9310] I have been much interested with the correspondence about "Dioxogen and 'Isle of Wight'." I am experimenting with it on my own and three other apiaries, and intended to faithfully record results.

But the letter in this week's JOURNAL from Mr. Heap impels me to write you at once.

The letter may be one from an expert but it is certainly not one from a true brother of a fraternity.

It is not a case of "The Blind leading the Blind," but a case of one bee-keeper trying to help others. Mr. Heap's letter savours too much of jealousy. We can thank Mr. Hollis for his honest endeavour to be of service and keep an open mind too.—WM. THORNE.

MR. HEAP AND TREATMENT OF "ISLE-OF-WIGHT" DISEASE.

[9311] Your correspondent, Mr. Chas. Heap, in the BRITISH BEE JOURNAL last week (9304, p. 260) seems to take a very pessimistic tone. He seems to be quite indignant with the Rev. A. H. Hollis for giving us his views. His idea that because the protozoon is inside the bee and the remedy is applied from necessity from outside "this wonderful Dioxogen" cannot reach them, is rather funny.

As to the long article by Mr. Heap (p. 257) may I ask one or two questions?

Has Mr. Heap got healthy stocks at the present time?

Has he never got a stock through an attack of Isle-of-Wight disease?

Does he suppose that *other* bee-keepers would be dissatisfied with a "cure," unless they could demonstrate by post-mortem that no bee in the hive contains germs of disease?

Does any one know the cause of the disease?

If all kinds of bees are equally subject to this disease, why should native bees be considered better than Italians.

As far as I can gather from Mr Heap's long letter he knows of no cure, or of no way of either preventing or checking the disease—in fact, can help us in no way whatever. All he can do is to assure us that every one else is wrong, and even he knows nothing of how to do any good. *Blind leading the blind.*—R. B. MANLEY.

THE USE OF THE HYDROMETER IN COMMERCIAL BEEKEEPING.

[9312] In your report of the "Field day" held at the Ruakura State Apiary in February last, and published in your issue of April 27th, a misleading error occurs which I hope you will allow me to correct. In the paragraph referring to the standard specific gravity suggested by myself as the minimum density of honey allowed to go on the market, you put it at "1.20," whereas it should have been 1.420, a vast difference. It may be of interest to your readers to learn the why and wherefore that brought the hydrometer into use, and why the specific gravity of 1.420 was fixed upon.

In your issue for November, 1883 (a copy of which I have before me), there is a report of a lecture on the composition of honey delivered by Mr. Otto Hehner, analyst, before the B.B.K.A. the previous month, of which the following is an extract:—

"Essentially, honey consists of water and of sugar. Of the water I need say but little except that I have found it to vary in quantity from 12 to 23 per cent., the normal proportion being from 18 to 21 per cent. When the percentage falls below 18 the honey is generally very hard and solid; when it is higher than 21 it is frequently quite or almost clear."

After reading the above it at once occurred to me that where such great variations in the water content of an article of food existed, some authoritative standard should be set up defining the maximum limit of moisture allowable in the honey of commerce—there was no limit at that time. Subsequently, when handling large quantities of honey from different beekeepers I found the density vary so much, some fermenting in a short time, that I became more than ever convinced of the necessity of devising some simple means, within the accomplishment of the average beekeeper, whereby reliable tests could be made of any given samples of honey to determine their keeping qualities, or, in other words, whether they contained an excess of moisture or not.

I had made hydrometrical tests of honey in 1884, and it struck me that if the minimum density at which honey would keep without deterioration for any length of time could be found by the hydrometer the object in view would be accomplished. It was not until I became Government Apiarist that I had an opportunity of carrying out a sufficient number of tests to determine the matter. During a little over three years I had made a large number of tests of different grades of honey before the result was published officially in 1909. Subsequently more tests were made, in all about 250, which confirmed the figures already published, viz., that any New Zealand honey of a specific gravity of 1.420 at 60 deg. Fahr., is in splendid condition for market. The water content of honey at the above density, as I have since learned, stands at 17.40 per cent. or near about.

In order to further test honey of the above specific gravity I had samples saved at the Government apiary each season from 1907 onward; these (about 60) were exhibited at the "Field day" last February, and all were in as good condition as when saved. The specific gravity of 1.420 has now been officially adopted as the minimum for honey that will be ac-

cepted for export; but it must be understood that nearly all New Zealand honey raised by commercial beekeepers is of a greater density. For instance, in 1915, 51 samples, gathered from all parts of the Dominion, were analysed for their water content, which averaged for the whole 51, 16.46 per cent.; so that British consumers of New Zealand honey can rely upon getting a good article.

When our food laws came into force, some three years ago, I found the maximum limit of moisture allowable in honey was 26 per cent.—in Australia it is 26 per cent., and in America 25 per cent. As these figures seemed to me ridiculous, I asked for a reduction to 20 per cent.: this brought about the 51 analytical tests, with the result of the adoption of the lower figures.—I. HOPKINS, Auckland, New Zealand.

QUERIES AND REPLIES.

Queries reaching this office not later than FIRST POST on MONDAY MORNING will, if possible, be answered in the "Journal" the following Thursday. Those arriving later will be held over until the following week. Only SPECIALLY URGENT queries will be replied to by post if a STAMPED addressed envelope is enclosed. All queries must be accompanied by the name and address of the sender, not necessarily for publication, but as a guarantee of good faith. Correspondents are requested to write on one side of the paper only

A BEGINNER'S QUERIES.

[9050] Will you kindly permit me to seek, through your columns, information on a few points in the art and mystery of bee-craft. I may say that up to a few weeks ago I have had no thought for beekeeping at all, but I was then favoured by a visit into my garden of quite a large swarm of bees, and in the emergency I was driven to makeshift expediencies. I borrowed a skep from a kindly neighbour, also a hive, and with a window curtain for a veil, a pair of gloves, and a rather palpitating heart I went forth to the capture. To my own surprise, and with no mishap, I succeeded in getting the bees installed in the hive. Since then I have been reading up bees, talking bees, and dreaming bees.

My attention is now directed to preparing for and wintering the insects successfully, and I find a multitude of counsellors and hardly know how to extract the wisdom. I read that in putting up for winter I must give special attention to good ventilation. I have been advised to cover the frames with American oil cloth and over this sundry other materials. I have also read of a glass covering for the frames being recommended, but where does the ventilation come in through these things? I think one wise counsellor advises me to lift up the brood box three or four inches, and to bore a 1-in. hole through bottom boards. What am I to do? Would holes bored in sides of brood box answer the purpose, or should I do nothing?

Would it be well to place the hive in a coach-house for shelter and safety through the winter, and should the hive be kept closed up? What say the Fathers of the Craft?—A NOVICE.

REPLY.—When packing up for winter place a couple of strips of wood about ½ in. thick across the tops of the frames, and three or four inches apart, then cover the whole of the tops of the frames with a square of unbleached calico, or a piece of ticking. The strips of wood give the bees a passage across the frames during winter. Over the calico quilt place several thicknesses of felt or carpet, or a chaff cushion. You may, if you like, use an "eke," about three inches deep, under the brood box, but the majority of beekeepers do not now use one. Do not bore holes either in the bottom or sides of the hive. Leave the hive out of doors during the winter with an entrance from four to six inches wide. Get the British Beekeepers' Guide book and follow the instructions it gives.

HONEY IMPORTS.

The registered value of honey imported into the United Kingdom during the month of July, 1916, was £32,388. From a return furnished to the BRITISH BEE JOURNAL by the Statistical Office, H.M. Customs.

Notices to Correspondents

H. H. P. WYLE (Somerset). *Uniting and Transferring.*—Unite the bees in the two boxes and the skep—the few bees in one box will help to make a strong stock. To unite, "drive" the bees from the skep into an empty skep, or box. Remove this carefuly when all the bees have run up, fix it on the strong lot in the box, and "drive" the bees up among those already driven, and so on with the weak lot. No flouring or other preparation is needed

to unite bees in this manner. Take out a couple of combs from each of the three frame hives, and hive the driven bees on them. Two of the queens should be caught as they run up, but if you fail to do this the bees, or queens themselves, will settle the matter. Better remove the box now. If the queen is on the bottom combs the bees may be cleared out by means of a bee escape, but be certain the queen is below before placing the clearer in position. If the queen is still in the top box "drive" it until the queen is secured and placed on the bottom combs.

R. WADGE (Jersey).—*Temperature of Hive.*—The temperature during summer will be about 98 deg. Fahr. It is quite possible to have the hives too warm. We have known the comb become too soft and fall down through overheating in hives that stood with no shade near a wall facing south.

NOVICE (Nottingham).—*Transferring Troubles.*—We cannot say why the bees decamped; it is very unusual for them to desert brood. Your method was much too rough and ready. A better plan would have been to drive the bees, cut the comb carefully out, and tie that containing brood, and as much of the other as possible into standard frames, which could then have been placed in the hive, and the bees put on them. As it was so late in the season the best thing would have been to winter the bees in the skep and allow them to work on to standard combs next year, as described on page 150 of the "Guide Book." We advise you to join the Notts. B.K.A. Hon. Sec., Mr. G. Hayes, 48, Mona Street, Beeston.

"STIM BILL" (Herts.).—*Using Honey for Winter Food.*—Add water to make it the consistency of sugar syrup for autumn feeding. It is safer to boil it, and medicate when cool.

"HAMPSHIRE" (Basingstoke).—There are a number of recipes for making mead. One is: To every gallon of water add 3lb. run honey and the rinds of two lemons. Boil for half an hour, keeping well skimmed, then pour into a cask, taking out the lemon peel. When the temperature has fallen to between 80 deg. and 90 deg. Fahr., add some brewer's yeast, and let it stand until fermentation has ceased, then bung up tightly and allow to stand about six months, when it may be bottled. You cannot "make" beeswax, that is done by the bees. It may be extracted by means of a Solar wax extractor, in which the heat from the sun is utilised, or you may use a "Gerster" or other pattern extractor using artificial heat, either may be procured from any appliance dealer. You will find full instructions in "Wax Craft," by T. W. Cowan, 2s. 2½d., post free, from this office.

L. H. (Preston).—The light coloured bees are young ones, just emerged from the cells. The one you sent had one wing malformed. It is not a sign of disease.

WINTERING (Stamford).—(1) Yes. (2) Yes. It has not been tried during the winter. (3) You cannot do more than medicate the food, and keep the hives clean and constantly supplied with a disinfectant.

Honey Samples.

REV. H. CROWE (Somerset).—No. 1 is good in flavour and colour, density fair, from very mixed sources. No. 2 is not quite so good in flavour as No. 1, but the density and colour are good, from clover and mixed sources. The Rymer Honey Press.

"ENQUIRER" (Beeston).—A good sample of clover honey of moderate density. You have used rather too much smoke, which has slightly tainted the honey.

R. W. BALE (Cricklewood).—Both samples are good. No. 1 is mainly from lime. No 2 from clover and lime; the density is better than No. 1.

"CHESHUNT" (Herts.).—The bottle was smashed in the post and the wrapping had absorbed most of the honey. So far as we could judge it was a good sample of clover honey and well up to the standard for a light honey.

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices (not exceeding 7 lines) in this column, 10 lines charged 5s. 6d., up to 15 lines 5s., which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

Cannock Horticultural Show, Saturday, Sept. 2nd. Eight Classes for Honey, &c., open to all. Good prizes offered. Jno. Bird, Secretary, 62, Allport-road, Cannock. **Entries close August 28th.**

Please note alteration of dates.

Special Prepaid Advertisements

Two Words One Penny, minimum Sixpence.

Will advertisers please read these Rules carefully in order to save trouble, as they will in future be strictly adhered to.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not permissible at above rate, but will be inserted at* 1d. *per word as* **"Business"** *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of* 3s. *per* ½*in., or* 5s. *per inch.*

PRIVATE ADVERTISEMENTS are only intended for readers having **Surplus Stock** *to dispose of.* **Driven bees, Nuclei,** *and* **Queens that are reared or imported for sale,** *are Trade Advertisements, and can only be accepted under trade terms.*

Advertisements must reach us NOT LATER than FIRST POST on TUESDAY MORNING for insertion in the "Journal" the same week.

Orders for three or more consecutive insertions in "The Bee Journal" entitle advertisers to one insertion in "The Bee-Keepers' Record" free of charge.

PRIVATE ADVERTISEMENTS.

REMINGTON'S Latest No. 10 Visible Typewriter, unsoiled, cost £25, sacrifice £13 10s; also Remington 7, equal new, £6 10s., or near offer; trial willingly.—WHITE, Arcade, Northampton. v 73

TEEMING healthy stocks, hybrid bees, 1916 queens, 25s.—VINCENT, 132, Croydon-road, Anerley.

SURPLUS Italian queen, Penna strain, July mated, 4s.—ALLEN, 143, Harrington-road, South Norwood. v 77

QUEEN.—One 1916 Black-Italian queen, warranted healthy, prolific, 5s. 6d.—HARPER, 39, St. James'-road, Watford.

SURPLUS pure Italian Fertile Queens, 5s. each; one quality, the best; honey, in bulk or bottle; two stocks of pure Italian bees, 1916 queens, wired frames, stocked with honey, 35s. each, f.o.r.—No. 3 APIARY, Burton Latimer, Northants. v 63

WANTED, honey, in bulk, about 2cwt., this season's; send sample and price.—ELDER, chemist, Prenton, Birkenhead. v 61

WANTED, two or three driven lots first week in September.—Write, L. KETTLE, Stamford. v 66

WANTED, a few cwts. of light English honey.—Sample and price to FISON, Rawdon, Leeds. v 63

DON'T WASTE TIME & MONEY

in experimenting with "freak cures" for Isle of Wight disease.

THIS disease is produced by a sporing organism and Spores are far more resistant than Bacteria to disinfectants. Reports of one of the greatest University Bacteriologists in this Country show that a 3 per cent. solution of Bacterol (General) will penetrate large bundles of tightly bound horse hair and kill Anthrax Spores embedded in the centre in 21 hours, without in any way altering the physical properties of the hair. No other disinfectant known to Science can accomplish this.

In using "Bacterol" therefore you are employing the most potent bactericide having a definite action on Spores but which at the same time is Non-Poisonous, Non-Corrosive, Non-Caustic, entirely free from objectionable odours, and possesses many advantages over every other antiseptic and disinfectant.

DIRECTIONS—Simply medicate syrup or spray bees with a weak solution.

Send at once for this Scientific preparation for this devastating and resistant disease and

CURE YOUR BEES NOW.

In the Two previous issues of the "B. B. J." a few convincing Reports were inserted from the large number received.

Bacterol (General) will be found very useful for many other purposes. See directions on label.

Autumn will soon be here. Make sure of getting your Bacterol now by sending P.O. for 2s. 9d., for a half-pint bottle, post free, from either of the following firms:—

"THE BRITISH BEE JOURNAL," 23, Bedford Street, Strand, London, W.C.

E. H. TAYLOR, Welwyn, Herts.

JAMES LEE & SON, Ltd., George Street, Uxbridge, Middlesex.

OR FROM THE MANUFACTURERS

BACTEROL, LTD., 19/25, BROOKSIDE RD., HIGHGATE, LONDON, N.

BRITISH BEE-KEEPERS' ASSOCIATION.

The Council of the British Bee-Keepers' Association are anxious to obtain gifts of honey for the wounded soldiers in the London Hospital, where it is urgently needed both for food and medicinal purposes. They will, therefore, be grateful for gifts of same, no matter how small, from bee-keepers throughout the British Islands. It is unnecessary to explain our obligations to these brave fellows, who have sacrificed health and limbs for the sake of our country. Gifts should be sent addressed to the Secretary, B.B.K.A., 23, Bedford Street, Strand. The donors' names will be published in the "B.B.J." and RECORD.

W. HERROD-HEMPSALL,
Secretary.

HONEY FOR LONDON HOSPITAL.

Amount already received ... 254½ lbs.

BLURTS FROM A SCRATCHY PEN.

MR. HEAP.

I am but little disposed to enter into any controversy. In the first place, I have but little faith in this manner of making converts. What says the old saw?

"Convince a man against his will,
He is of the same opinion still."

Secondly, I cannot be bothered with it. It takes too much time, and too much trouble. My contributions to the BEE JOURNAL are written as an amusement, a diversion, and if others are amused by them I am well repaid. Therefore, avoiding controversy, I should not have entered into this present wordy war had not Mr. Heap so pointedly attacked me. I should not have thought him worth notice, should have left to others to give him the castigation he has asked for, and deserves, and will no doubt get. If, then, I hit him very hard, he has only himself, and his lack of manners, to thank for it.

In order to get to other matters, I will condense what I have to say on the resistancy of Italian and kindred races of bees to "Isle of Wight" disease into as short a space as possible. What Mr. Heap writes on this subject does not weigh with me one grain. Why should it? Who constitutes him an authority? Himself! Must I take him at his own valuation? I hope not. My sources of information are quite equal to those of Mr. Heap. It may be they are better. It is now three or four years ago since I commenced, with an absolutely open mind, to observe which kinds of bees seemed the least to suffer from the epidemic of "Isle of Wight" disease. I am compelled to admit that the Italian and Alpine races seem to be the most resistant. Nor am I alone in this conclusion. Many others whose opinions are most valuable give the same verdict. Having, then, their confirmation, and my own observations, I can only consider what Mr. Heap writes as (to quote his own choice word) "Fudge." He is obstinately determined to see facts only from his point of view. If he were broadminded, he would allow that there is quite a possibility that he may be wrong.

You are ever kind and patient, Mr. Editor, with those who, often at considerable time and trouble, send their contributions to your pages; but I am beginning to think that your good nature is being imposed upon. Mr. Heap, as I have said above, constitutes himself an authority on the disease—nay, even something more: he is (again, at his own valuation) the arbiter as to what is right and wrong. Note how he dismisses his opponents with supreme contempt. "Correspondents *have written without knowledge*, and not a few bee-keepers who have read the reports of the Board of Agriculture *have failed to understand them*, or they imagine their own ideas, based on *ignorance or credulity*, are superior to the actual findings of people who have been studying such subjects all their working lives." (The italics are mine.)

Really, I ought to ask your pardon, and that of your correspondents, for duplicating such an insult, but the excerpt is unavoidable. So, according to Mr. Heap, people who differ from his one-sided view are *ignorant and credulous*. Now, if Mr. Heap had contributed something of importance to the knowledge we have, he might have been permitted to use strong epithets, but I cannot find that he has. Again, men who have the grit to rise to prominence usually know how to express themselves with courtesy. Abuse never was, and never will be, an argument. The necessity to use it only registers the level of the

mind of the user. I have now been a contributor to, and constant reader of, your paper for a score of years. At different times I have read, I believe, nearly all the volumes of the BEE JOURNAL. I cannot call to mind, in all these years, a previous instance when a writer has so forgot his manners, even though some of the correspondents (and often the most worthy of them) have never had the opportunity to learn how to express themselves fluently. If further evidence were necessary that it behoves Mr. Heap to go to school again, and learn one of the very first lessons of courtesy, namely, due respect to the opinions of others who differ, that evidence would be forthcoming in his letter "The Blind leading the Blind." What Dioxogen may or may not be able to do for bee-keeping, I am not going to discuss; that is beside the present question. The article was well thought out and deserved respect, but Mr. Heap, the arbiter of right or wrong, because it was opposed to *his* views, considers himself capable of correcting it.

"Fools rush in where angels fear to tread."

Note Mr. Heap's usual choice style: "He hopes no one will waste time and money in following the advice"; "he (Mr. Hollis) displays absolute ignorance of the subject in which he attempts to instruct others"; and similar samples of his polished ways of expression.

En passant, it is equal to Mr. Heap's impertinence to advise me as to what stocks I shall pronounce diseased, or free from disease.

I have always found that they who have most knowledge are likewise the most modest, the least desirous of claiming leadership in that knowledge. It is as the mahogany is to the veneer and the superficial soon betrays itself.—J. SMALLWOOD.

A NOTE BY THE WAY.

The B.B. JOURNAL, of 17th inst., contains the diatribe of Mr. Heap, and the cheering inset of "Bacterol, Ltd." Mr. Heap contends that cured stocks are not free from the "Isle of Wight" disease. On his assertion are beekeepers to accept his theory, and let the disease wipe out the honey bee without an effort to cure it, or are we to persevere in our quest for an effectual remedy? Mr. Smallwood (page 185, B.B.J., 15th June) says we have so many things on hand we must allow the "Isle of Wight" disease to continue its ravages till after the war. I beg to differ. We must fight the arch foe to our industry with every weapon that we have, and invent others more potent, if our present ones fail.

Regarding Bacterol, I have used it on four stocks. Mr. R. Lee sent me a bottle of the stuff at the end of May, but no name with it. The first stock I tried the remedy on were Dutch bees. I had been using "Gelston" cure for ten days, dusted lime, Lysol and formalin for 14 days, still a few crawlers; then used phenol and formalin till May 29th, stock depleted very much; May 30 I fed daily 1 lb. jar of syrup, with ½ teaspoonful of Bacterol in it till June 8th, when crawlers ceased, bees began working with a vim, as bees do when they are well. Early in July I put a rack of 21 sections on this colony, and a fortnight later a second rack under the first.

Stock No. 2, a new stray swarm (English). May 19th, a week afterwards, crawling started; in the afternoon of 26th I gave phenol and formalin till Lee's cure came; 30th May gave the syrup, as to the Dutch stock above, up till June 8th, when crawling stopped altogether. This stock has filled two racks of sections, and are busy as ever working for winter stores, apparently as well as if they had not had the disease—they are cured! The other two stocks cured were simply sprayed on the front and alighting boards of the hives. Both had less than a week's spraying, both have become useful stocks, whereas if I had not used the remedy both would have been dead—the way these stocks have worked since tells its tale. If this is not proof enough for our "Doubting Castle" dwellers I will close with the assertion of the Blind man in the Parable to the doubters of his day, "That whereas I was blind now I see."

I trust we shall now see our apiaries renovated, and the countryside flower gardens in a short time alive with the busy bees, as of yore.—W. WOODLEY, Beedon, Newbury.

WITH THE BEES AT THE FRONT.

By Ex-Sergt. A. G. Atwell.

The next time I paid a visit to the Apiary at Festubert I found that it was practically demolished; not only had many more shells fallen around, but most of the hives which were any good for the purpose were used to help make barricades or build up trench supports, as a trench now cuts right through the apiary. There was only one stock left, and there was no roof on the hive. The honey in the outside combs had granulated with the cold, but the bees were clustered in the centre, and upon examination I found several patches of brood in the middle. This, if I remember rightly, was about

the middle of March, and as I felt that the bees could exist very little longer where they were, I found the queen and sent her in a box to the BRITISH BEE JOURNAL Office, but unfortunately she did not live long after arrival. There was so much wax lying about from the many broken combs that I decided to collect it, and melt it down. I therefore went a few days later and gathered it all up. I took it to an empty house a little distance away, where I found a big, round galvanised tank; this I half filled with water, lit a big fire under it, put all the combs into it, and boiled them well down, and then strained the contents through several thicknesses of very fine wire netting. When this was cold I took a good-sized cake of wax from the top of the water, which I remelted into a more convenient size for carrying. I now have the cake of wax among my other curios, although, of course, it really needs refining again, as it is rather dark in colour, owing to its having been procured mostly from old brood combs.

The next place I should like to talk about is the Orphanage at the town of Bethune, some eight miles behind the firing line, but of course well within range of the Huns' big guns, and they frequently bombard the cross roads, railway station, and other important parts. Once when we were resting at Bethune we were billeted at the Orphanage, as all the inmates had been sent to a safer part of the country. Only two or three of the staff remained to look after the small farm which included several stocks of bees. I soon got into conversation with them as I could see the bees wanted attention. They were very pleased when I told them I understood the bees, as the man that usually looked after them was away at the war. Some section and shallow frame racks had been left on from the previous year, but they were badly fitted and wanted re-adjusting. This I soon accomplished, having to cut away several nice slabs of honey, which the bees were beginning to place in rather awkward positions through the racks not being properly fitted. In addition to the frame hives there was a bee house with several skeps full of bees, but I was unable to do very much to these as it was too early in the year. I paid several later visits to this apiary, and was always made very welcome by the people there.

[The next article will conclude Sergt. Atwell's very interesting narrative. We still have the dead queen in the box in which she was sent. The label, made from a piece of adhesive plaster, on which is written "Queen bee from the front," is still attached.—EDS.]

CORRESPONDENCE.

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DIOXOGEN AND "ISLE OF WIGHT" DISEASE.

A REPLY TO MR. C. HEAP'S CRITICISM.

[9313] I have read with some amusement Mr. Heap's letter in the August 17th issue of "*B.B.J.*," and his article under "Random Jottings" in the same number. His letter shows animus and prejudice, making him a most unreliable witness, and his advice very misleading. He has not tried the effect of Dioxogen himself, and apparently considers as untrustworthy such letters as that of Mr. W. Mountney on the page facing his own letter, and other letters of the same kind from bee-keepers who have cured their bees by using the simple treatment recommended by me in "*B.B.J.*" of July 20th and 27th.

Mr. Heap starts straight away by hoping no one will waste time or money in following my advice. May I say here that a bottle of Dioxogen costing elevenpence contains about 7 fluid ounces? When used in dilution in the proportion of 1 in 6, there is available for spraying purposes 42 fluid ounces, sufficient with care to spray about six good stocks of bees. This works out at less than twopence per stock. If there are any bee-keepers who consider twopence too heavy an outlay wherewith to save a stock of bees I can only say they deserve to lose them. Ten minutes or quarter of an hour is as much as need be spent in the matter of time on each stock.

Mr. Heap proceeds to tell your readers that I confessed to being only an amateur in bee-keeping, and he at once jumps to the conclusion that I must therefore be absolutely ignorant.

When Mr. Heap has time to spare from consulting the pages of his science-dictionary I would advise him to take an elementary course in logic.

I did indeed confess to being a novice in bee-keeping, but I did not say I was an amateur in scientific research. I have my own modestly-equipped laboratory which

for many years has been a great interest to me. My microscope and sets of slides of insect and plant life have given me many a pleasant hour.

Mr. Heap's reasoning is illogical and absurd. As well might he argue that Lister's discovery of the vaccine lymph is of no value, because that Lister was not an experienced cowkeeper, or that Pasteur is not to be trusted because, forsooth, he had never kept a pack of hounds. Mr. Heap falls upon me mercilessly because I avoided the abstruse scientific terms in which he revels. I wrote my article not for scientific theorists, but for practical bee-keepers. I spoke of a "bacillus," and I hope I conveyed an intelligible idea of a microscopic organism, which, I fear, Mr. Heap's "protozoon" fails to convey to the majority. I spoke of "air passages" when I ought to have used Mr. Heap's nice word "spiracles," and stomach when the right word was "chyle stomach."

It was very ignorant of me to speak of "the lower part" of the bee's body, when there was such a fine way of referring to it as the "pigmentated chitine" of *Apis mellifica*.

Mr. Heap asks in scorn, "How is Dioxogen going to reach the protozoon of disease when the evil beast *creeps into* and between the cells of the gut?"

I would answer him by another question. Mr. Heap remarks that the protozoon makes his home not on the outside but inside the bee. I take it he means that spraying the bees is useless, and so he asks "How is Dioxogen going to reach the inside of the bee?"

Will Mr. Heap allow me to spray his bees, not with Dioxogen, but with a solution of strychnine or arsenic? They ought to suffer no harm if Mr. Heap's reasoning is dependable. If, on the other hand, his stocks are destroyed, it will give him a melancholy satisfaction, no doubt, to be assured by the public analyst that traces of the poison were discovered in the chyle stomach, intestines, and the hæmocœlic fluid.

It is sufficient for the practical bee-keeper to know that Dioxogen has cured speedily stocks that were diseased. He will not need to kill every bee in the colony and examine it microscopically to see if the disease is cured (as suggested by Mr. Heap in the aforesaid "Random Jottings"). It will be sufficiently convincing for him when he sees his stocks working with redoubled vigour, all signs of disease having disappeared. May I conclude by quoting against himself the concluding words of Mr. Heap's "Random Jottings"?:—"I think it is a great pity that there is so much loose thought, writing, and talking on this subject . . . . because it is all highly misleading and delays indefinitely the great effort that will be needed to get rid of the disease, and to bring about a revival of the industry."

REV. A. H. HOLLIS, Beer, E. Devon.

THE BLIND LEADING THE BLIND.

[3111] I read with no little surprise Mr. Chas. Heap's rather bitter attack on the Rev. A. H. Hollis in your issue of August 17. Both men are seeking a means of curing "Isle of Wight" disease, the former a bee-keeper of long standing, the latter only a beginner, but, of course, there was a time when Mr. Heap, too, was only a "novice." We all have to make a beginning, and I think a more generous spirit should be displayed to those (though only beginners), offering the result of their experiments to the readers of the "B.B.J." for what they are worth, receiving nothing in return. If we are to go forward it is the brotherly co-operation of bee-keepers we need. Those men who strive to eliminate disease should prove an asset to the craft, and slight inaccuracies in diagnosis should be overlooked, seeing that "Isle of Wight" disease has baffled so many for so long. I will give an instance that occurred to me. Some two years ago I purchased a perfectly healthy stock on eight combs, taken from a 10-frame hive; there was no disease in the district from which it was procured. During railway transit the crate got knocked about, and slightly forced open. Some railway official tied newspapers round the crate to prevent bees escaping, thus leaving practically no ventilation. On arrival the bees showed signs of "Isle of Wight" disease. I sent a sample to the "B.B.J."; the reply came "Isle of Wight" disease. I did all I could to save them, but they eventually died out, the remaining two combs left in the 10-frame hive the sender retained, and kept under close observation. They produced nothing but thoroughly healthy bees, and when I last heard from him there was no disease in or around his district. Now what produced so rapid a development of disease? Overheating in transit I should imagine. Mr. Heap, while correcting Mr. Hollis' "most glaring errors," says the seat of the disease is the chyle stomach and intestines, the gut itself is also attacked, etc. That would be so in a long standing case, I'll admit, but in the one I refer to the condition was produced in the course of a few hours, and might have been cured as quickly had the *proper* remedy been at hand.

It is my opinion that nothing will cure an absolutely chronic case, but a slightly affected one might have a trial with Dioxogen before being destroyed. I have tried most of the largely advertised

remedies, but without success, having twice lost all my stocks. I am now waiting for better times before re-starting. In the meantime I am managing a small apiary of fourteen stocks for a relative, called away on war service. I am continuing the work he started, and so far we have bred out the disease. No signs of anything this year, but should "crawlers" appear I should certainly give our friend Hollis' Dioxogen remedy a trial.

Let us encourage and not discourage others' efforts in this direction, and I feel certain we will triumph over "Isle of Wight" disease as surely as we will in the great European struggle. Though only a bee-keeper of a few years' standing, I have spent some of my happiest moments among the bees, and reading bee literature. The assistance of the Editors so readily given, and the kindly advice and help have been greatly appreciated by me in the past, and I long for the time when I can again set up my hives and follow the craft I love so well.—WALTER E. GARDNER.

EXPERIENCE WITH IZAL AND DIOXOGEN.

[9315] Thinking my experience will be of interest to readers of the B.B.J. I submit the following:—

On July 22 I hived a swarm of native bees on eight standard combs, which they covered.

On August 1, the weather being very warm and honey coming in freely, I found, on examination, the brood chamber was becoming choked with honey, and wishing to give the queen full scope for her laying powers I inserted three Izal washed combs in centre of brood nest. I used a solution of one teaspoonful of Izal to one pint of water, and the combs were still strong with the odour when I inserted them.

August 7. Found three queen cells half built, two on one side of the last three combs added, and one on the other side.

August 11. Queen cells left incomplete, and queen remaining on one side, the Izal washed combs now being partly stored with honey.

I had a similar experience with a swarm of Italian hybrids which I hived on eight Izal washed combs. They were very reluctant to take possession, but in this case, I found about eight queen cells distributed throughout the hive and abandoned after about the third day, by which time, I presume, they had fanned the odour out and decided to remain, as in the other case.

From the foregoing, I should think a good way to get queen cells in the early summer would be to insert a couple of Izal washed combs in centre of brood nest, and after three or four days removing those where queen cells were started to form nuclei.

As regards Dioxogen I find it an excellent remedy for bee stings. A little sprayed on the affected part immediately after being stung almost instantly stops the irritation and prevents swelling.—T. H. W.

AN AMATEUR'S EXPERIENCES.

[9316] As an "Amateur Bee-Keeper" may I be permitted to offer a few remarks in answer to Mr. Heap's two articles in the JOURNAL of August 17th. Taking first his remarks and criticism of the Rev. Hollis, one is very much surprised to find among brother bee-keepers such harsh treatment as is here meted out to one, who without doubt has done a great kindness in recording his experiences with "Isle of Wight" disease.

I don't think anyone can construe Mr. Hollis' first *or* second letter into an "attempt to instruct" other people, and I feel sure, in common with hundreds of bee-keepers, he does not profess to know the scientific side of the working life of *Nosema apis*. I confess to absolute ignorance myself—but for all that, I have cured two of my own stocks of the disease this spring with Izal treatment, and two of a neighbour's (who has kept bees for 53 years!!) with Dioxogen after reading the first of Mr. Hollis' letters; in fact, I started treatment with Dioxogen the same day I received the JOURNAL, *i.e.*, on the day it came out! Whether the disease will break out again or not is a thing for which we will have to "wait and see." And this brings me to Mr. Heap's article under "Random Jottings."

As one of the despised "Last year's novices," I started, as I have previously informed you, in May, 1915, with one swarm and a cast in June. From these two I had 60 lbs. surplus, and brood combs well stored for winter. Both stocks developed "Isle of Wight" disease in winter, but I persevered with Izal treatment as well as one can under winter conditions, and have so far succeeded in keeping it at bay, or at least quiescent, and have increased from two stocks to thirteen at the present time, and have up to the present netted over 3 cwt. of surplus, for which I am getting top prices, namely 80s. cwt. for extracted, of which I have sold 1½ cwt. and have about another ½ cwt. left, and over a gross of sections, which fetch me 12s. 6d. dozen first and 10s. seconds! My stock, which had the disease the worst, I have made into three, one of the first swarm, and the others, the stock divided. I have had 90 lbs. surplus in sections, and they are still storing! The

other swarmed once, and have had 60 lbs. from stock and 80 lbs. extracted from swarms, and still storing!

I have raised over a dozen queens from the two stocks, and have disposed of all those I did not use myself. Mr. Wells, of Colchester, has bought the two nuclei made from the badly diseased stock, knowing their history, and acknowledges to me that they are magnificent stock. He has now supered them!

Now, Mr. Editor, I am frankly admitting my entire ignorance of scientific methods of research, in any field, but may I remind Mr. Heap of the hundreds of vastly important inventions and discoveries made by amateurs, and by accident—to quote two:—Printing and X Rays!

Also, with regard to his remarks about curing "Isle of Wight" disease, my opinion may be worth less than nothing, but I think we never shall *cure* it, any more than our scientists can *cure* consumption, or smallpox, and dozens of other diseases, let alone the ordinary common cold! *But* we can fight it, and so keep it in abeyance. And herein lies our hope. I think my foregoing remarks, about my own colonies, will prove that it is worth while trying, and all praise to the men or women who do try and record their results. My personal thanks to Mr. Hollis.—FREDK. M. CLARIDGE.

PRESS CUTTING.

BEESWAX: ENGLAND THE MARKET.

GERMAN COMPETITION SHOULD BE PERMANENTLY EXCLUDED.

During the war England has become the selling centre of beeswax, such as should have been her place in pre-war times, and such as one trusts she will retain after the war.

At all times shipments from every part of the world have been made to London and Liverpool, although before the war Hamburg made a huge bid for shipments from South America, and gradually succeeded in obtaining ever-increasing quantities from countries like Peru, Chile and Brazil, as well as of East and West African parcels shipped by German liners. On the other hand, although this appears almost inexplicable to-day, the German market did not have the slightest difficulty in peace time in repurchasing practically all the suitable parcels which arrived in London and Liverpool, and redelivering all these parcels to Russia after "refining" them and adding an "adequate" amount of profit.

THE SPOT MARKET.

As the position now stands, the spot market in England has been considerably thinned, but as the English merchants will in the course of time receive further arrivals from every producing centre, it is incumbent on the Russian buyers to make their purchases for forward delivery at an early date, and they cannot be recommended too strongly to restrict the distribution of their orders to the few suppliers who have acquired (on long standing) a reputation as scrupulous wax buyers and sellers, and who can be relied upon, not only to ship first-class pure quality in each case, but to contract for no greater quantity than they can, and will, faithfully deliver.

GOOD VARIETIES.

The parcels which come to the English market, and which can be particularly recommended, are:—

Abyssinian in fairly large quantities and generally pure.

Benguela, which enjoys the same reputation.

Chilean and Peruvian, which secures a high premium on account of its special bleaching qualities and naturally pale colour; but in this direction we would also mention that, in spite of the high prices paid for Chilean wax, for instance, of late considerable quantities of adulterated material have found their way to Liverpool, and caution is necessary, but, of course, the regular buyer will insist upon the analysis of one of the highest authorities.

A very large quantity of East and West African wax is exclusively shipped to the English markets, and these parcels can generally be relied upon fully.

This category includes such varieties as Gambia, Sierra Leone, Conakry, Mozambique, Zanzibar, etc.

A small amount of Egyptian beeswax also reaches England, and in this case again an analysis is an essential thing. The same may be said practically throughout as far as European parcels are concerned originating from Spain, Italy, Portugal, etc.

From America we have fairly substantial quantities from Cuba and San Domingo, shipped either direct from New York, or, in some cases, re-shipped from London and Liverpool.

Morocco ships some good-sized parcels, but discretion is necessary, as some of the wax is adulterated with goat fat and still more with paraffin wax.

Algiers and Tunis send small lots of generally good quality.

A fair quantity is also obtainable at times from Madagascar, arrivals coming direct from place of origin to London, or, in some cases, re-shipped from Marseilles.

SWISS DEMANDS.

As far as the Marseilles beeswax market is concerned, however, an almost inex-

plicable rise has taken place, and it has been found that this is due to large quantities being re-sold and transferred to Switzerland. The sudden growth, or we may say sudden birth, of this large consumption in Switzerland is apt to appear exceedingly mysterious, and it is only natural that certain quarters consider that these stocks in Switzerland have been purchased by other countries and are to be held in store "until after the war."—E. S. LUBOFF.—From the *Financier and Bullionist*.

P. NEWTON (Millom).—*Wintering Bees in a Granary.*—It will be much better to winter them out in the open. If the hives are weatherproof so that the bees are kept dry the cold will not harm them.

ENQUIRER (Preston).—*Removing Taste of Smoke from Honey.*—If honey is tainted with smoke or carbolic acid it is not possible to take the taste away. Use very little of either when removing surplus, just enough to quieten the bees. Do not attempt to smoke them out of the supers or drive them out with a strong carbolic cloth, use a super clearer. Izal would not affect the honey unless used very strong and close to it.

H. F. (Northampton).—The sugar is not suitable for winter food. *White* cane sugar should be used. *Brown* sugar, even if pure cane, contains molasses, and if fed to bees will probably cause dysentery. (1) Feed slowly for a week or ten days, then rapidly. (2) Give them at night by shaking sufficient necessary for the purpose on to the alighting-board of each stock requiring help, taking care first of all to remove the queen from the driven lot; they run in and no fighting occurs.

Honey Sample.

C. ROYDS JONES (Dorset).—One of the best samples of honey we have seen this year, mainly from clover. If you read p. 87 of "Producing," etc., you will notice that the directions given for straining honey through flannel are to do it when the honey is hot.

Suspected Disease.

J. A. HANLY (Bedale).—The bees were affected with "Isle of Wight" disease.

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices (not exceeding 7 lines) in this column, 10 lines charged 3s. 6d., up to 15 lines 5s., which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

Cannock Horticultural Show, Saturday, Sept. 2nd. Eight Classes for Honey, &c., open to all. Good prizes offered. Jno. Bird, Secretary, 62, Allport-road, Cannock. **Entries closed.**

Special Prepaid Advertisements

Two Words One Penny, minimum Sixpence.

Will advertisers please read these Rules carefully in order to save trouble, as they will in future be strictly adhered to.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not permissible at above rate, but will be inserted at* 1*d. per word as* "**Business**" *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of* 3*s. per* ½*in., or* 5*s. per inch.*

PRIVATE ADVERTISEMENTS are only intended for readers having **Surplus Stock** *to dispose of.* **Driven bees, Nuclei, and Queens that are reared or imported for sale,** *are Trade Advertisements, and can only be accepted under trade terms.*

Advertisements must reach us NOT LATER than FIRST POST on TUESDAY MORNING for insertion in the "Journal" the same week.

Orders for three or more consecutive insertions in "The Bee Journal" entitle advertisers to one insertion in "The Bee-Keepers' Record" free of charge.

PRIVATE ADVERTISEMENTS.

WANTED, about 1 or 2 cwt. honey in bulk.—DOLLIS PARK DAIRY, Church End, Finchley, London, N.

3 CWT. LIGHT PURE CAMBRIDGESHIRE HONEY, in 28lb. tins, 95s. per cwt.; sample 3d.; also four dozen 1lb. jars, 12s. per dozen.—J. YOUNGER, 29, Newmarket-road, Cambridge. v 88

WANTED, offers light colour honey, anything to 5 cwt; prices, etc.—BURGOYNE, Assistant Overseer, Lyonshall, Herefordshire. v 87

WANTED, a skep or driven bees, pure goldens; good price for pure.—JELLINGS, 8, Stoke Green, Coventry. v 86

WANTED, lots driven bees; September, price.—106, Ronald Park-avenue, Westcliff, Essex. v 85

HONEY in bulk, finest light clover, £5 per cwt., cash or deposit; sample 3d.—PEARSON, Shalbourne, Wilts.

TWO surplus Dutch queens, 1916, first class strain, very prolific, 4s. each.—J. MOORE, Bleasby, near Notts. v 82

3 CWT. light English honey, 28lb. tins, 90s. cwt., f.o.r.; sample 1b. 1s. 4d., post free.—HULL, Cowsley-gardens, Notts-road, Derby. v. 80

QUEENS, limited number, choice, prolific, tested, 5s. 6d. each; two 10s; safe arrival guaranteed; splendid honey gatherers.—MRS. HAMMOND, Mount Pleasant, Steyning. v 79

FOR SALE, one new W.B.C. hive, five nearly new, with one lift each, all parts interchangeable, £3 10s., the lot; deposit; approval anywhere; particulars, stamp reply.—W. KING, 20, Moy-road, Cardiff. v 90

12 STRONG stocks with heavy stores, 1916 queens, including good hives, 25s. each on rail; seen by appointment.—ADAMS, Tilford, Heathhurst-road, Sanderstead. v 89

WANTED, geared honey extractor, must be in perfect order; give price, maker's, description and full particulars.—G. LONGDEN, Draycott, Derby. v 91

A FEW tested Dutch queens, very quiet gentle bees, excellent workers, 5s. 6d. each, post free.—W. WOODLEY, Beedon, Newbury.

APIARY with this season's honey for sale; easy access London; ideal situation for bees; low rent cottage, or plant could be removed.—Write "O. O.," c/o. Vickers, 5, Nicholas-lane, E.C.

QUEEN.—One 1916 Black-Italian queen warranted healthy, prolific, 5s. 6d.—HARPER, 39, St. James'-road, Watford.

WANTED, honey, in bulk, about 2cwt., this season's; send sample and price.—ELDER, chemist, Prenton, Birkenhead. v 61

A FEW travelling crates, bottles or sections, 2s. 6d. each; Porter escapes, slightly soiled; excluder zincs, also feeding bottles, with stages, all 1s. each; six good strong Gayton hives, zinc roofs, 7s. 6d. each.—X. Y. Z., BEE JOURNAL, 23, Bedford-street, Strand, W.C.

LIMITED number, four frame nuclei, headed by 1916 Italian queens, now arriving direct, very disease resisting and vigorous, 20s. each.—SMALLWOOD, Finchley-lane, Hendon, N.W.

TO CURE EACH HIVE

OF BEES ATTACKED WITH ISLE OF WIGHT DISEASE

COSTS LESS THAN ONE PENNY

if you feed the bees with one teaspoonful of "Bacterol" (General) in one pint of syrup.

Much acrimonious discussion has been appearing in this Journal relative to differences of opinion as to whether this devastating disease is curable. The whole matter narrows itself down to this, that those who have the slightest doubt have not yet used "Bacterol." Its complete success is vouched for by many prominent Beekeepers, after thorough tests on the most hopeless cases. Such well-known authorities as the Editor of the *Bazaar and Mart*, Mr. E. H. Taylor, of Welwyn, Herts, Messrs. J. Lee & Son, Ltd., of Uxbridge, Middlesex, and many other experts recommend "Bacterol" as a definite cure.

Mr. W. Woodley, of Beedon, Newbury, one of the oldest and most respected Beekeepers in this country, wrote to the "B.B.J." last week that, after unsuccessfully trying other disinfectants and cures, he had quickly cured four stocks with "Bacterol" which would otherwise have died.

The bees like it, the cure is very rapid, and what is of remarkable importance, nearly every report speaks of it imparting to the bees a more vigorous life than they ever possessed before.

DIRECTIONS—Simply medicate syrup or spray bees with a weak solution.

"Bacterol" is the most potent yet non-poisonous disinfectant known to science. All its forms are non-corrosive, non-caustic, non-irritating, entirely free from objectionable odours, make clear solutions, and possess many advantages over every other Antiseptic and Disinfectant. You will find "Bacterol" (General) very useful in many other directions. (See Label.)

Send to-day a P.O. for **2**s. **9**d. for a half-pint bottle of "Bacterol" which is highly recommended by and can be obtained post free from either of the following firms, which are so well-known in the bee world:—

JAMES LEE & SON, Ltd., George Street, Uxbridge, Middlesex.

"THE BRITISH BEE JOURNAL," 23, Bedford Street, Strand, London, W.C.

E. H. TAYLOR, Welwyn, Herts.

OR FROM THE MANUFACTURERS

BACTEROL, LTD., 19/25, BROOKSIDE RD., HIGHGATE, LONDON, N.

BRITISH BEE-KEEPERS' ASSOCIATION.

The Council of the British Bee-Keepers' Association are anxious to obtain gifts of honey for the wounded soldiers in the London Hospital, where it is urgently needed both for food and medicinal purposes. They will, therefore, be grateful for gifts of same, no matter how small, from bee-keepers throughout the British Islands. It is unnecessary to explain our obligations to these brave fellows, who have sacrificed health and limbs for the sake of our country. Gifts should be sent addressed to the Secretary, B.B.K.A., 23, Bedford Street, Strand. The donors' names will be published in the "B.B.J." and RECORD.

W. HERROD-HEMPSALL,
Secretary.

HONEY FOR LONDON HOSPITAL.

Amount already received ... 254½ lbs.

A ROLL OF HONOUR.

Although bee-keeping is considered a minor pursuit, we venture to say that it has provided more fighting men than the usual average of any industry. To place on record the part the members of our craft have played in the present war we propose to make a "Roll of Honour," and shall be pleased if our readers will forward us the NAMES and ADDRESSES, together with the REGIMENT and RANK, of any bee-keeper serving his King and Country at home or abroad; also if killed or wounded.

We print a further list of names to those sent in, and shall be pleased to have other names as soon as possible.

Gnr. Herbert Valley, Saxilby, Lincs.—8th Reserve Battery, R.F.A.

Pte. Percy J. North, 9, Charles Street, Cambridge.—Suffolk Regt.

CRAYFORD AND DISTRICT BEE-KEEPERS' ASSOCIATION.

SHOW AT DARTFORD HEATH.

The Crayford and District Bee-Keepers' Association held a successful show and exhibition at Maypole House, Dartford Heath (by permission of Mr. and Mrs. Knight) on Saturday afternoon, the 26th August. The honey and appliances were staged in the studio, which proved an ideal place for the purpose. There were some 200 visitors, including many bee-keepers well known in the bee-world.

In spite of the very late season the show was surprisingly good, and too much praise cannot be given to the quality of the exhibits staged, which were much in advance of those of last year; in fact the exhibition compared most favourably with the Royal Show recently held at Manchester, both in quality and the quantity. The judge, Mr. J. Herrod-Hempsall, spoke highly of the show, which was good considering members had not yet recovered from the effects of the epidemic of disease.

The full prize-list was as follows:—

Cup Competition.—Mr. G. Baird (Erith), 18 points; Mr. W. H. Prior (New Eltham), 14 points; Mrs. Bryden (Rochester), 11 points. Four points were given for first prize; three for second, two for third, and one for fourth.

Class I. (11 entries).—Six Sections—1, Mr. G. Baird (Erith); 2, Mr. R. Berrington (Erith); 3, Mr. J. Arnold (Sidcup); 4, Mr. H. J. Lewis (Sidcup).

Class II. (11 entries).—Three Sections—1, Mr. S. Allnutt (Greenhithe); 2, Mr. W. H. Prior; 3, Miss Brooks (Sidcup); 4, Mr. A. C. Paulin (Bexley).

Class III. (21 entries).—Three Jars Light Honey—1, Mr. A. R. Ouzman (Eltham); 2, Mr. W. H. Rowe (Rochester); 3, Mr. J. Reader (Chatham); 4, Mr. G. S. Baird and Dr. C. C. Lord (Orpington).

Class IV. (5 entries).—Three Jars Dark Honey—No. 1st price; 2, Mr. G. Bryden and Mrs. Bryden (Rochester); 3, Mr. S. Heaselden (Erith); 4, Mr. W. H. Prior.

Class V. (4 entries).—Three Jars Granulated Honey.—1, Mr. G. Bryden; 2, Mr. W. H. Prior; 3, Mr. G. S. Baird; 4, Mrs. Bryden.

Class VI. (7 entries).—Two Shallow Frames—1, Mr. G. S. Baird; 2, Mr. J. Reader; 3, Mr. W. H. Prior; 4, Mr. E. D. Till (Eynsford).

Class VII. (7 entries).—Beeswax—1, Mr. G. S. Baird; 2, Mr. G. B. Barnes (Dartford); 3, Mrs. Bryden; 4, Mr. W. H. Prior.

Class VIII. (9 entries).—Honey Cake—1, Mrs. Dewey; 2, Mrs. Holloway; 3, Mrs. Judge; 4, Mrs. Bryden.

Class IX. (4 entries).—Honey Products—1, Mrs. Judge; 2, Mr. G. Barnes; 3, Mrs. W. H. Rowe (Rochester); 4, Mrs. Davis (Crayford).

Class X. (13 entries).—Home Made Appliances—1, Mr. W. H. Prior; 2, Mr. J. Reader and Mr. A. C. Paulin; 3, Mr. S. Heaselden; 4, Mr. A. Dewey.

Class XI. (1 entry).—Educational Exhibits—1, Dr. C. C. Lord (consisted of exhibits of honey from orange groves, brought from Palermo, Sicily; also toys, photos, water carrier, etc.).

Class XII. (11 entries).—Gift Class (one

jar honey).—1, Mr. J. Reader; 2, Mr. G. S. Baird; 3, Mr. H. J. Upton (Greenhithe); 4, Mrs. Banks (New Eltham).

Class XIII. (7 entries).—Gift Class (one section)—1, Mrs. Bryden; 2, Mr. S. Allnut; 3, Mr. H. J. Lewis; 4, Mr. S. Heaselden.

(To be continued.)

CORK BEE-KEEPERS' ASSOCIATION.

GENERAL MEETING.

The sixteenth annual meeting of the Cork Bee-Keepers' Association was held on Saturday, at 12, Marlboro' Street. Mr. Michael Lynam, V.P., occupied the chair. There was a fair attendance of members, considering the very busy season and the scarcity of labour.

The minutes having been signed, a considerable amount of correspondence was read, including apologies for non-attendance from the Rev. P. Power, Blackrock; Miss Harrison, Ballinahina, and Mr. Patrick Fahy, Castlelyons.

There is apparently a great scarcity of honey this year all over the British Isles. Three applications for large quantities of honey, both section and extracted, were placed before the members. One wholesale dealer desired to secure from 25 to 30 tons of run honey in 56lb. tins, a second wanted 75 dozen sections, and as many 1lb. bottles of extracted honey as could be sent, whilst a private individual applied for 100 sections for home use.

The Secretary was instructed to inform these applicants that owing to the great loss of stocks during the past two unfavourable seasons, very little Irish honey was likely to be exported this season.

Mr. James Blemens, Horticultural Instructor, D.A.T.I., proposed the names of over a dozen new members, including all the bee appliance dealers of the city (with one exception), over £2 subscriptions to the funds being handed in.

The Chairman heartily thanked Mr. Blemens for the very practical manner in which he showed his interest in the welfare of the Association, and suggested that he could confer a further benefit by inducing the cottagers who keep bees to join the Association, and thereby secure the privilege of sound and reliable advice in the management of their stocks, as well as the advantages accruing from the honey depot recently established in the city for the purchase of members' honey.

Mr. Blemens suitably acknowledged the thanks of the meeting, promising to keep the Chairman's suggestion in mind.

The officers next resigned, and were accorded the usual vote of thanks.

Mr. R. H. Beamish, D.L., the president of the Association since its institution, was unanimously re-elected.

The Chairman stated that before the election of the remaining officer was proceeded with, he desired to state that he had occupied the office of chairman for the past three years, and he would be very glad to hand over the position if a suitable successor could be secured.

The members were of opinion that as he had discharged the duties of the office so energetically and successfully during his tenure of office the change would not be to the advantage of the Association.

The outgoing officers were then re-elected as follows:—Chairman, Michael Lynam; Hon. Secretary, Mathew Kiely, Ardarostig, Cork; Hon. Treasurer, John Rearden, solr., 12, Marlboro' Street, Cork.

A good Working Committee was next elected.

In connection with the election of committee, Mr. Hennessy called attention to the excellent work, not only in horticulture, but in bee-keeping, performed by Mr. J. Kavanagh, County Horticulturist, D.A.T.I., for the western division of the county, and he thought the Association should place on record their recognition of Mr. Kavanagh's efforts for the extension of the minor cottage industries among the cottagers of West Cork.

Mr. Kavanagh was co-opted as member of the committee.

The Chairman suggested that the consideration of the annual report be postponed, as owing to the large amount of war news coming in, only the briefest outline of the proceedings of their meetings could hope to find insertion in the Cork Press at present.

The suggestion having been agreed to, the meeting terminated.

ANCIENT BEE LITERATURE.

VIII.—BEES IN GREECE.

In dealing with bees and bee-keeping in Greece in olden times there is an embarrassment of riches. A large number of the well-known classic writers, poets, philosophers and historians have dealt with bees, several of them in considerable detail, while many have referred to the bee or its products to point a moral or adorn a tale.

Among the chief early writers are Homer (perhaps 1000 B.C.); Hesiod, about the 8th century B.C.; and Herodotus, the "Father of History," about 500 B.C. Homer deals with bees in his Iliad and Odyssey and also in his miscellaneous poems. There was a widespread idea and belief that a visit of bees to an infant, or if an infant were fed on honey in early years, he was certain in later life to be gifted with eloquence. Euripides ascribes such a gift to the "Divine" Homer. "The Phrygian god enriched his tongue with honeyed eloquence." Hesiod used the same simile—"Upon his tongue they

shed a balmy dew; and words as honey sweet drop from his lips." Homer, too, himself in the Iliad describes the wonderful gift of speech granted to Nestor, "pleasant of speech, from whose tongue flowed discourse sweeter than honey." Homer received honey as a part of his early nourishment from a priestess of one of the gods, hence there followed his wonderful flow of imagery and marvellous word pictures.

Two big quotations from Homer's poetry must suffice. In the grotto of the nymphs we are told "Cups and jars of stone are ranged, and bees lay up their honey there." An army called to arms is compared to a swarm of bees—"Even as when swarms of thronging bees issue from some hollow rock, even so their companies marched forth to the place of assembly."

Hesiod, 800 B.C., wrote a poem in four cantos named "Works and Days," dealing with all rural pastimes and occupations on the lines later imitated in the Georgics. He treats the drones harshly, "The stingless drones devouring sergi with glutted sloth the harvest of the bees." Again he contrasts the worker bees and the base slothful drones:

"*These* all the day their murmuring labours ply.
Those lurk within eating the fruits of other's labours."

Hesiod was highly honoured in Greece—"Nymphs in their fount laved Hesiod's corse," and "The shepherds there the honey shed"—on his grave. Homer and Herodotus mention this tribute paid to the dead, and the latter also tells what sacrifices were offered—bread, honey, raisins, figs, frankincense, myrrh and oil were used. He describes the process of embalming with honey and wax, whereby the bodies were preserved for an indefinite length of time. A great traveller, he had seen this carried out or been informed minutely how it was done in Egypt and Persia. He tells us of fierce bees who held up a passage across the Danube, and also of a skull fixed up over the gates of a town seized on by bees as their home. They filled it with honeycomb and honey.

The admirable discipline and order maintained in the hive is given by Plato as a model for a republic. He also commends their industry while on the wing and when out foraging, visiting every flower and gathering only what is sweet from all, a pattern to all youths in towns and states. Plato is another to whom eloquence was gifted by bees while he was yet in his cradle. Pindar sings of the Bee of Delphi, and does it so well that Horace later yields the palm to him, and calls himself in comparison "a tiny minstrel who like a mature bee culls the pleasant thyme with ceaseless toil."

Aristotle was *the* great Greek writer on bees, and, indeed, was the only one we know of who devoted a whole book to the physiology, anatomy, and general structure of bees. With great expenditure of time, toil, and distant travelling he studied the whole subject of bee-keeping to such good effect that until quite recently every writer on apiculture copied extensively from him, while their books were almost wholly constructed on his great compendium, for he, too, borrowed from every source available up to his time.

Amongst other Greek writers, mostly poets, who made reference to bees may be named Æschylus, Alcæus, Anacreon, Apollonius, Aristophanes, Athenæus, Euripides, Sophocles, and Theocritus, but not many of them yield freely to brief quotations.

Little has been said of honey used in cooking, but it was extensively so used. "Cheesecakes are to be eaten, also ask for Attic honey, the feast's crowning dish." Honey was an ingredient of this cake. Cheesecake "amply steeped" in honey was a favourite delicacy—"A luscious cheesecake, O ye honoured gods, and this year's honey in a silver dish." Roasted thrush well smeared with honey was a dainty dish. "Almonds, they mingle well with honey." "Rape and oatmeal groats and honey." "Wheatflour cakes and honey." At a marriage feast "the board was loaded with rich honeycomb." "All kinds of pastry and sweet honey." "Cakes made of sesame and honey." "Enerides with sweet honey"—these are a few references to the use of honey as a dainty food.

Of course the Greeks had their mead as well as the Scandinavian nations, and its use was common. They had also a popular drink called honey-wine. Wine mixed with water is heard of, and honey and milk was a favourite thirst-quencher. At the great god-feasts honey-drinks were very popular. Charon, as we have heard, lamented the waste of mead poured out in such copious streams in libations to the honoured dead.

Of the parts of Greece most connected with bees may be named Athens. Close by stood the fair Mount Hymettus, with its slopes covered with wild thyme as with a garment. There the yellow-banded bees roamed collecting the delicious sweet which has given a name and fame to this hill for all time. Mount Ida in Crete is credited with being the place where the bees, as already mentioned, saved the life of Zeus in his infancy by a supply of the delicate honey fed him by the goddesses. Another Mount Ida, in Asiatic Greece, was also noted for the superior quality of its honey, and is associated with the early domestication of bees. The heights of the Rhodope and "the lofty Panzae," on the

confines of Macedonia and Thrace, are the seat of the fabled taming of bees by Bacchus, when he shut them up in the hollow oak. The honey of Attica generally was very fine, and Corinth honey had a fame of its own. Migratory bee-keeping was carried on in Greece, bees being taken from Achaia as far as Attica. They were also transported in boats from one part of the coast of Thessaly to another to catch the flow from different sources.

The famous "Grecian" hive was at an early date in apiculture so arranged that surplus honey could be obtained without killing the bees, and we glean many hints to convince us that bee-keeping was then in a forward condition. The bee, too, was studied and highly appreciated for its own inherent virtues, as well as for the delicious sweet it conferred on mankind freely and at little cost. M.

ECHOES FROM THE HIVES.

What sort of a season? A most peculiar one indeed. January was almost summer-like. Winter quarters vacated meant scant stores, and young bees and an abnormally high death rate in March and April, many bee-keepers in the Mid-Cornwall district suffering losses ranging as high as 80 per cent.

Wasps, as well as bees, became very scarce. My own winter losses were less than 14 per cent., but in the last week in June all were on the verge of starvation owing to a very wet and cold mid-summer month. July came most beautifully fine, and with hives teeming with bees, and the country white with clover, anxiety ended, hope was rewarded, and a record made, two hives actually building comb outside after hive lifting.—J. M. BEST, Trewoon Apiary, St. Austell, Cornwall.

"It is an ill wind that blows nobody any good." This is an old saying which is coming true this year; I mean as regards the bees. The five months drought which we have experienced here in Jersey has resulted in an exceedingly good honey flow, and the hives are positively crowded with bees. I am wondering where the bees will find room in the hives when the last supers are taken off. I had a stray swarm on July 7th; these have already ample stores sealed for winter.

One advantage is, the bees need not be moved to the heather, as there are acres of it within one hundred yards of my apiary.

I find that hives with next to no quilts do the best; I have only one thickness of calico over the frames in the summer.

I am glad to say there are no signs of "Isle of Wight" disease in the island. I think the reason is that fruit trees are never sprayed.

I wish wasps could be exterminated; they are a perfect plague this year.—F. N. COLEBROOK, La Maisonette, Faldonet, Gorey, Jersey.

CORRESPONDENCE.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

THE INCUBATION OF BEES.

[9317] I should be inclined not to notice the letter signed "Experientia docet" in B.B.J., August 17th, were it not that he refers to Mr. Simmins' book "A Modern Bee Farm," and the inexperienced reader might suppose that Mr. Simmins' authority was in support of the views advanced. This is not the case. For very many years I have been a great admirer of the thoroughness and wonderful success of Mr. Simmins' methods. The fact is that he does not touch bee incubation in our sense at all. In his treatment of, and directions for queen rearing, he advocates the use of a "lamp nursery" in which queen cells, cut out of the frames, may be incubated more safely than in the hives. But if queen cells, why not other cells equally well? The reading of "Experientia docet" has been most superficial. He confuses the application of artificial heat (in early spring to whole hives of bees) with the incubation of sealed larvæ, which may be conducted throughout the season. The former has never been a practical success, though Mr. Simmins tells how, by resting a hive on fermenting stable manure and packing it well round with the same material, he got the bees well up in the supers in April. For reasons which the writer of the letter gives, Mr. Simmins condemns the idea as impracticable, as do all other writers. Your correspondent might as well argue that because keeping poultry in early spring in an artificially raised temperature has always proved a costly

failure, unless in exceptional circumstances, so it is useless to attempt the incubation of hens' eggs at any time. By applying, as he does, Mr. Simmins' remarks on artificial heat (page 323 of the new and enlarged edition) to bee incubation, the whole of his statement on the matter is simply untrue. He informs us, too, that he believes that the early Egyptians made use of incubation of bees. Inasmuch as it is necessary for this to remove individual combs from the hive, we may expect that some sarcophagus will some day be opened in which will be found an ancient Egyptian beehive with movable combs, which no doubt will be of standard pattern.

"Experientia docet" omits the last word of the motto which he uses as his *nom de guerre*. Supposing the first word bears some subjective application, one is reminded of another Latin adage, "Exceptio confirmat legem."

The paper on bee incubation was written last year, but was held back for further experiment. I was from home during spring, and a friend having obtained the paper recently, sent it to your journal, and told me that he had done so. I should have been glad to have made certain alterations, though mostly verbal. Inasmuch as I think that the matter is no longer in the merely experimental stage, I should like, with the permission of the editors, to make a few observations on its practical utility:—

1. It will, I think, be found most useful in increasing stock. This is the nicest and most interesting method of using it. It will be useful to those who have only a few hives, but we will consider a case of one who has ten or more hives, and which are in fairly strong condition. A frame of foundation is introduced into the middle of the brood in nests of, say, 10 hives. An outside frame may be removed if thought well. On the following day, or the day after, the foundation will be found drawn out and nearly every cell will contain an egg. On the seventh day from the laying of the eggs, the cells will be sealed. On that day or the next, therefore, the body box of the incubator will be carried down to the apiary, and the ten combs, now solid slabs of sealed brood, will be placed therein and put in the incubator, which has previously been raised to a temperature of about ninety degrees, Fahrenheit. On the thirteenth or fourteenth day after, that is, twenty days from the laying of the egg, some young bees will be found crawling about the comb, others eating (this is a very pretty and interesting sight) their way out of their cells. Now is the time to transfer them to the hives which you intend them to occupy. In a day or two later they will be able to fly about your incubator room.

(To be continued.)

DIOXOGEN AND "ISLE OF WIGHT" DISEASE (P. 232).

[9318] I am glad to see someone else has the same experience as myself. With regard to the way the disease affects the insect, it seems to say more than ever that the disease is really one of digestion, and I firmly believe we may be nearer a remedy than we imagine. I have thought since my letter, "Experiences and Guesses," that if we could get the bee on the wing it would go a long way towards relief, but the season is wrong when the affliction is rife. I know nothing about this new remedy, but it reads as if it can be used at any time.

Is it contagious?—This is up against some big scientist ideas, but we have some pretty strong conflicting evidence to bring, and any foul, accumulated matter, such as unripe pollen, would set up fermentation, and owing to late autumns and mild winters the bees can gather and consume this to excess, and we have had quite a lot of seasons like this now.

This and lowered vitality through continual inbreeding has, perhaps, let our bees down, and this is about the only way in which the frame hive does not help the bee, and save energy, as far as I can see. Again, this taking place all over the country would naturally affect them all alike, but need not be contagious. And why does the disease appear at certain periods, generally spring? Do bees from warmer climates take a larger amount of rest in the winter? This might prove an interesting comparison, and might be useful in coming to some decision on this point. I must say my Goldens fly in colder winds than do natives. —A. H. Hamshar.

THE CRITIC CRITICISED.

[9319] Mr. Heap's article and letter, in which he assumes the *rôle* of an outspoken critic, have naturally laid him open to attack; but, though some of his conclusions do not seem to be justified, there is much sound commonsense in what he writes, and I should like, if I may, to take his statements one by one and criticise them.

In the first place Mr. Heap is quite right in taking his stand on the reports issued by the Board of Agriculture. To discuss all over again the main conclusions arrived at in these reports is so much waste of time, and the ordinary bee-keeper cannot do better than accept them and conduct his experiments in the light of this knowledge. Having said this I should like, in

the most friendly spirit, to point out where it seems to me Mr. Heap goes wrong.

The Board of Agriculture was among the first to suggest the search after an immune strain of bees as one of the most hopeful ways of combating the disease. Unless Mr. Heap has tried every known variety of honey-bee and found them all to contract the disease and die off equally quickly, he cannot say that an immune bee does not exist. Even partial immunity might be of some value. Of course, colour has nothing to do with it. It is the history of the complaint in the country the bee comes from that makes all the difference. If measles or an ordinary cold in the head is introduced among certain savage tribes, the malady, it is said, assumes a more virulent form than it usually does among Europeans. Presumably, where a disease has been longer established, people have had time to become partially immune to it, and either do not contract it as readily, or, if they have it, it takes a milder form. Why should not this be true also of *microsporidiosis*?

I asked a chemist to explain the action of peroxide of hydrogen to me. He pointed out that the formula for it is very similar to that of water; both are a combination of hydrogen and oxygen, but peroxide contains two extra molecules of the latter. When it is applied the excess of oxygen comes away, leaving nothing but pure water. So it is simply a way of giving oxygen. Now the Rev. A. H. Hollis pointed out that, after spraying, the bees cleaned themselves and *swallowed* the peroxide. Is Mr. Heap prepared to assert that the oxygen given off cannot reach the Nosema in the bee's intestine, or that it can have no effect upon it? I admit myself incapable of answering this question. It is well known that oxygen administered to human beings at the point of death often prolongs life to a certain extent. I have known bees with "Isle of Wight" disease to gather honey, and Mr. Hollis is to be congratulated if his remedy, so simple and safe, merely enables them to store a little more before they die, and so recoup the bee-keeper to some extent for his loss.

Mr. Heap asserts that "no disease ever dies out so long as the organism which produces the disease is able to find a host," and speaks of "a great effort that will be necessary to get rid of the disease." What form does he think the "great effort" should take? There is support from the Board of Agriculture for saying that the drinking supply may be a serious source of infection, and also that spores of *Nosema apis* will preserve their vitality for several years. How are ponds and other sources from which bees obtain water to be freed from infection? Does Mr. Heap propose that bee-keeping should be prohibited in certain areas until the disease has died out in those areas? If so, legislation would be necessary, and though this may be highly desirable I see little hope of obtaining it for years to come. In the meantime, what are we to do? Some pin their faith on an immune bee, but I have always had more hope in the discovery of some drug, which, being taken into the bee's intestine (preferably by putting it in syrup or candy), would without harming the bee destroy or arrest the development of the Nosema.—L. Illingworth.

THE EFFECTS OF DISINFECTANTS ON "ISLE OF WIGHT" DISEASE.

[9320] Mr. Heap's letter has deservedly called forth several protests against his discourtesy to the Rev. Hollis, and many of your readers will be glad to see the appropriate reply from him. But putting aside the discourtesy, the only point in his letter that really matters is the assertion that "Isle of Wight" disease is caused by a protozoon, not a bacillus, and therefore the use of a disinfectant is waste of time. Is this a mere assertion or a proven fact? If it has not been proved will some capable bacteriologist make a laboratory experiment with Dioxogen and Bacterol on the spores and protozoa of Nosema and report? It would help us much.

My own experience goes to confirm the uselessness of disinfectants, for although I have had periods of happy belief after their use, as many of your correspondents evidently have, a little longer experience has proved them all to be delusions and snares.—F. W. Duke, Ongar.

HINTS ON MAKING APPLIANCES.

[9321] In the "B.B.J." for July 20 Mr. L. W. J. Deuss, in a most interesting article on the Nyasa bee, remarks on the difficulty of getting "hints and tips" on making bee appliances, and the strong necessity of them to some who are far distant from the dealers such as we have in England. I was once in the same difficulty when I had the time to make my own appliances, and by accident discovered a little book, which, so far, I have not seen or heard mentioned among bee-keepers and papers. It is called "Beehives and Appliances," published by Cassell & Co., Ltd., London, from the office of the weekly paper "Work," and is edited by Paul Hasluck. It contains full details of how to construct various types of hives, extractors, nucleus and observatory hives, honey ripeners, feeders and other necessary appliances, and would, I think, prove very useful to Mr. Deuss. If he is unable now to obtain a copy I shall be pleased to lend him mine.—Campbell Pinkney, Sleights, Yorks.

WEATHER REPORT.

WESTBOURNE, SUSSEX.

AUGUST, 1916.

Rainfall, 1.67in.
Below average, 1.01in.
Heaviest fall, .45, on 29th.
Rain fell on 17 days.
Sunshine, 199.7 hrs.
Below average, 13.4 hrs.
Brightest day, 3rd, 13.3 hrs.
Sunless days, 1.
Maximum temperature, 79, on 1st.
Minimum temperature, 41, on 31st.
Minimum on grass, 35, on 31st.
Frosty nights, 0.
Mean maximum, 69.7.
Mean minimum, 54.9.
Mean temperature, 62.3.
Above average, 2.2.
Maximum barometer, 30.337, on 5th.
Minimum barometer, 29.414, on 30th.

L. B. BIRKETT.

Notices to Correspondents

Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. All questions must be accompanied by the sender's name and address, not neeessarily for publication, but as a guarantee of good faith. There is no fee for answering questions.

A. C. WILLIAMS (Edinburgh).—*Dealing with Queen when Uniting.*—Cage the queen you wish to keep for twelve hours. (2) A little medicated food will help them.

ANXIOUS TO LEARN (Stirlingshire).—(1) Half teaspoonful to 8lb. sugar. (2) If you space them at all do it after feeding up. (3) The nucleus may come through the winter if treated as you suggest. The bees should cover five combs. The safest plan will be to unite it to another stock.

C. W. EWING (Kent).—(1) Continue the slow feeding to the end of the week then feed rapidly. (2) If the bees cover ten combs leave them all in; if not, take one or a couple away. (3) Not if there is plenty of food stored in the combs.

H. JONES (Salop).—The best thing will be to remove the frame hive, winter the bees in the skep and try to get them to work down next year.

Special Prepaid Advertisements

Two Words One Penny, minimum Sixpence.

Will advertisers please read these Rules carefully in order to save trouble, as they will in future be strictly adhered to.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not permissible at above rate, but will be inserted at* 1*d. per word as* "**Business**" *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of* 3*s. per* ½*in., or* 6*s. per inch.*

PRIVATE ADVERTISEMENTS are only intended for readers having **Surplus Stock** *to dispose of.* **Driven bees, Nuclei,** *and* **Queens that are reared or imported for sale,** *are Trade Advertisements, and can only be accepted under trade terms.*

Advertisements must reach us NOT LATER than FIRST POST on TUESDAY MORNING for insertion in the "Journal" the same week.

Orders for three or more consecutive insertions in "The Bee Journal" entitle advertisers to one insertion in "The Bee-Keepers' Record" free of charge.

PRIVATE ADVERTISEMENTS.

FEW 1916 Fertiles, over from re-stocking scheme, 4s. 6d. each.—JUDGE, Hon. Sec., Crayford B.K.A., Barrowdene, Shepherd's-lane, Dartford. v 4

TWO young Dutch queens, 5s. each; light honey, 14lb. tins, 10s. 6d. each; sample, 2d.—HALL, 2, Borough, Hinckley. v 3

QUEENS, a few young English, 4s. each; two, 7s.—HUNT, Westmoors, Dorset. v 2

PRIME stocks of healthy bees, very cheap.—VINCENT, 132, Croydon-road, Anerley. v 1

EXTRACTOR FOR SALE, price 10s.—51, Lower Mortlake-road, Richmond, Surrey. v 100

QUEEN, vigorous, healthy, imported, Italian Golden 1916 queen, 4s. 6d.—E. H. HIPKINS, Owen-street, Tipton. v 95

BOOKS on Bees and Bee-keeping (cheap).—Returnable list from BEARDER, Mayfield, Sale, Cheshire. v 94

THREE very fine young fertile queens, in introducing cages, 5s. each, post free.—ROLLINS, Stourbridge.

WANTED, about 1 or 2 cwt. honey in bulk.—DOLLIS PARK DAIRY, Church End, Finchley, London, N.

3 CWT. LIGHT PURE CAMBRIDGESHIRE HONEY, in 28lb. tins, 95s. per cwt.; sample 3d.; also four dozen 1lb. jars, 12s. per dozen.—J. YOUNGER, 29, Newmarket-road, Cambridge. v 88

WANTED, lots driven bees; September, price.—106, Ronald Park-avenue, Westcliff, Essex. v 85

12 STRONG stocks with heavy stores, 1916 queens, including good hives, 25s. each on rail; seen by appointment.—ADAMS, Tilford, Heathhurst-road, Sanderstead. v 89

A FEW tested Dutch queens, very quiet, gentle bees, excellent workers, 5s. 6d. each, post free.—W. WOODLEY, Beedon, Newbury.

APIARY with this season's honey for sale; easy access London; ideal situation for bees; low rent cottage, or plant could be removed.—Write "O. O.," c/o. Vickers, 5, Nicholas-lane, E.C.

QUEEN.—One 1916 Black-Italian queen, warranted healthy, prolific, 5s. 6d.—HARPER, 39, St. James'-road, Watford.

A FEW travelling crates, bottles, or sections, 2s. 6d. each; Porter escapes, slightly soiled; excluder zincs, also feeding bottles, with stages, all 1s. each; six good strong Gayton hives, zinc roofs, 7s. 6d. each.—X. Y. Z., BEE JOURNAL, 23, Bedford-street, Strand, W.C.

FOR SALE ¼ plate Koilos camera, with Goerz Dopp anastigmat f/6.5 lens, can be used either for hand or stand work, twelve single dark slides and film pack carrier. The whole packs in stout block leather sling case, 9in. long, 6in. deep, and 2½in. wide; also light brass telescopic tripod, in leather sling case, all in excellent condition, and used by me to take the illustrations in "Helpful Hints" and "Continental Wanderings." The outfit for sale in one lot for £6; reason for selling have bought a Reflex. A splendid opportunity for anyone wanting a good reliable camera. Will send on approval; Deposit.—HERROD, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

SAVE YOUR BEES
FROM ISLE OF WIGHT DISEASE.

Every Autumn millions of bees die from this infection, involving tremendous losses to Bee-keepers.

Many "cures" have been put forward from time to time, and though occasionally one of these has been found to be of some assistance, in the end all have proved useless.

After hundreds of tests by well-known Bee-keepers in all parts of the country, it has now been demonstrated beyond dispute that if the bees are given syrup medicated with a small quantity of Bacterol (General) or sprayed with a weak solution, the good effect is almost immediate, and within a week the bees will be on the wing and working. Further, all reports note the new life and energy which this treatment imparts. Such well-known authorities as the Editor of the *Bazaar and Mart*, Mr. E. H. Taylor, of Welwyn, Herts., Messrs. J. Lee & Son, Ltd., of Uxbridge, Middlesex, and many other experts recommend Bacterol as a definite cure.

In last week's BRITISH BEE JOURNAL this subject was fully dealt with in a four-page supplement, and many reports were quoted. The following are taken from hundreds already received :—

August 8, 1916.

"To-day I have taken off 21 full sections from the cured hive."

August 8, 1916.

"You remember, of course, the strong evidence of 'Isle of Wight' disease which confronted you on your visit to my bees the other week; I am pleased to say that as a result of using the Bacterol you so kindly and promptly supplied, there is now no trace of any crawlers; even round those hives where masses of affected bees lay in heaving heaps there is not one to be seen. The quickness of the disappearance is really marvellous."

July 20, 1916.

"We have to thank you for your letter of the 19th inst., as regards the use of Bacterol General as a cure for I.O.W. Bee Disease. I can only say that it certainly has cured several stocks which were badly affected with the trouble in the early part of the bee season. The stocks treated have made splendid headway, and are now in first class condition."

July 29, 1916.

"On July 1st I received from you the Bacterol for my bees. The two hives were at the last gasp, nearly all the bees crawling on the ground. I at once gave some syrup containing one teaspoonful of the Bacterol to them, which they took readily. To-day not a bee is crawling, and each stock is working vigorously and bringing in honey. I believe they are *quite cured*, but I shall continue to put a teaspoonful of the syrup at the entrance of the hives now and again. I notice the laden bees take a sip sometimes before going into the hives.

"I thought you might like to hear the result. I myself am so delighted. I have kept bees now thirty years successfully, but the last five years could not keep them alive anyhow."

August 15, 1916.

"I am glad to tell you the first dose quite set the best hive right, stopped the crawlers, and cleared the alighting board of weak bees, and I took two supers from it, and extracted 44 lbs. of honey, and have left one super and a crate of sections on it, which I hope will be finished in a few days if the weather continues good. So you can imagine how pleased I am to save such a good stock. The only other hive I have left was all right after one dose, but I am continuing feeding it with syrup and Bacterol, as I am afraid it will be too weak to winter. The year before last I took over 200 lbs. of honey from three hives, and I now hope for future success with the aid of your feeder and Bacterol."

All forms of "Bacterol" are Non-Poisonous, Non-Corrosive, Non-Caustic and Non-Sticky. They make clear solutions and are entirely free from objectionable odours, and possess many advantages over every other antiseptic and disinfectant.

Bacterol (General) will be found very useful for many other purposes. See directions on label.

Autumn feeding is now in full swing. Make sure of getting your Bacterol now by sending P.O. for 2s. 9d. for a half-pint bottle, post free, from either of the following firms :—

E. H. TAYLOR, Welwyn, Herts.

JAMES LEE & SON, Ltd., George Street, Uxbridge, Middlesex.

"THE BRITISH BEE JOURNAL," 23, Bedford Street, Strand, London, W.C.

OR FROM THE MANUFACTURERS

BACTEROL, LTD., 19/25, BROOKSIDE RD., HIGHGATE, LONDON, N.

RE-STOCKING SCHEMES.

We are pleased to see that the Cumberland and Westmoreland B.K.A. is following the lead given by the Crayford and District Association, and has inaugurated a scheme for re-stocking its members' apiaries with bees.

We suggest to other county and district associations the advisability of adopting a like scheme for supplying those members who have lost their bees with fresh, healthy stocks, thus enabling them to make another start in bee-keeping. The result would be that not only would individual bee-keepers benefit, but it would bring an influx of members, and corresponding prosperity to the associations. More than that, we have no hesitation in saying that the whole country would benefit.

Had the country been as well stocked with bees this year as it was eight years ago, what a bountiful harvest of honey would have been secured from the wealth of white clover that bloomed this year, and we have not the least doubt that the crop of fruit would also have been much larger than it is.

The Crayford and District B.K.A. are to be heartily congratulated on their foresight in starting the first practical scheme, and on its unqualified success during the past season. At the beginning of the year it was calculated that about thirty nuclei would be required. Up to date over sixty have been distributed, an increase of 100 per cent.—a percentage corresponding to their increase in membership this year.

We cannot do better than quote the following from a letter sent to the *Bromley District Times* by Dr. C. C. Lord, a member of the council:—"The aim of the association is to re-stock its members' apiaries with bees to replace those lost by the ravages of the 'Isle of Wight' disease. A breeding scheme is being carried out with a view to producing a strain of bees that will withstand the disease. Up to date about sixty colonies have been produced, many of which have already been distributed. These colonies consist of four standard combs, with brood, food, and a guaranteed fertile and laying queen, and the cost to members is the very moderate one of ten shillings. The association has struggled to maintain its activities during the war, as it looks upon the production of stocks, and of honey for food, as a work of national importance, which, in my opinion, it undoubtedly is."

Of course, it has meant a lot of work for several of the officials, but it has been a labour of love, freely given, though it has meant devoting every minute, almost, of leisure from their daily toil to work at the association's apiary. Some of the results were seen at the annual show in the increased number of entries and a larger attendance. This we know was very gratifying and encouraging to the officers and committees.

The Cumberland and Westmoreland apiary is established in the garden of Mr. Robert Slack, Derwent Hill, Portinscale, which has been placed at the disposal of the association. On Saturday, August 9th, Mr. J. Price, the expert, gave a lecture and demonstration at the apiary, in the course of which he referred to experiments with two proprietary remedies for "Isle of Wight" disease, and said that at this apiary it was proposed to make trials with these things. So far as he knew this was the first county to adopt such an experiment, and he hoped that with the loyal co-operation of the local committee and of bee-keepers generally it would be a success.

BRITISH BEE-KEEPERS' ASSOCIATION.

The Council of the British Bee-Keepers' Association are anxious to obtain gifts of honey for the wounded soldiers in the London Hospital, where it is urgently needed both for food and medicinal purposes. They will, therefore, be grateful for gifts of same, no matter how small, from bee-keepers throughout the British Islands. It is unnecessary to explain our obligations to these brave fellows, who have sacrificed health and limbs for the sake of our country. Gifts should be sent addressed to the Secretary, B.B.K.A., 23, Bedford Street, Strand. The donors' names will be published in the "B.B.J." and RECORD.

W. HERROD-HEMPSALL,
Secretary.

HONEY FOR LONDON HOSPITAL.

Amount received	254½ lbs.
Miss Jackson	7 lbs.
Total	261½ lbs.

CRAYFORD AND DISTRICT BEE-KEEPERS' ASSOCIATION.

SHOW AT DARTFORD HEATH.

(*Continued from page* 279.)

In Class X.(home-made appliances) much ingenuity was shown by one exhibitor (Mr. Heaselden) in the way old cocoa and other tins could be utilised in making metal ends. In Class VIII. (honey cake), too, was seen some excellent specimens, and in Classes I. and II. (sections) there was much improvement upon those shown last year. In the light honey class (III.) competition was very keen, there being 21 exhibits. The only class in which there was need for improvement was Class VII. (beeswax), and, in the judge's opinion, the exhibits were not clean enough.

In the non-competitive section a collection of 100 lbs. of honey, made up from samples loaned by Messrs. Judge, Bryden, and Prior, built up into a trophy in a most artistic manner, formed one of the attractions of the show. Other interesting features were some Colonial exhibits of honey and wax from Ontario (Canada) and Western Australia. Amongst the novelties was a sample of wild East African honey, from Wandorobo, in a native leather bag, which had been presented to the editor of the "B. B. J." by Mrs. Birch, of Okehampton, and loaned for the occasion.

It is interesting to record that the exhibits of Mr. Reader (Chatham), 1st, 2nd and 3rd, in Classes XII., VI., and III. respectively, were produced by one of the nucleus colonies supplied under the association's re-stocking scheme. The colony was only delivered on the 9th July of this year, yet the bees built up and produced without assistance a completed super of honey in time for the show, and this is all the more remarkable from the fact that Mr. Reader's apiary is situated almost in the heart of Chatham.

At 5.30 an adjournment was made to the lawn, where the tea was served by members of the Social Committee, after which several photographs were taken by Mr. A. Dewey, the President of the Association.

It had been arranged to hold a general meeting directly after tea, but owing to the lateness of the hour it was decided to organise a Conversazione at a later date, and postpone the meeting until then to decide the question of adopting the title of "Kent Bee-Keepers' Association" in place of the present one.

Mr. G. Bryden presented to the Association a silver challenge cup, said to be the best of its kind in this country (which had been on view during the afternoon) for competition amongst the members, the cup to be awarded to the exhibitor gaining the highest aggregate number of points in the various competitive classes. In the event of the show being discontinued for a period of three years the cup is to revert to the British Bee-Keepers' Association.

This was followed by another presentation, and this time the recipient was Mr. J. M. Bates, who had acted as Hon. Secretary to the Association since its inauguration in 1904 until the beginning of the present year.

Mr. E. R. Stoneham (past president), in making the presentation, referred to the excellent work done by Mr. Bates for the Association, and on behalf of the members he had much pleasure in asking Mr. Bates' acceptance of a revolving desk-chair.

Mr. Bates suitably replied.

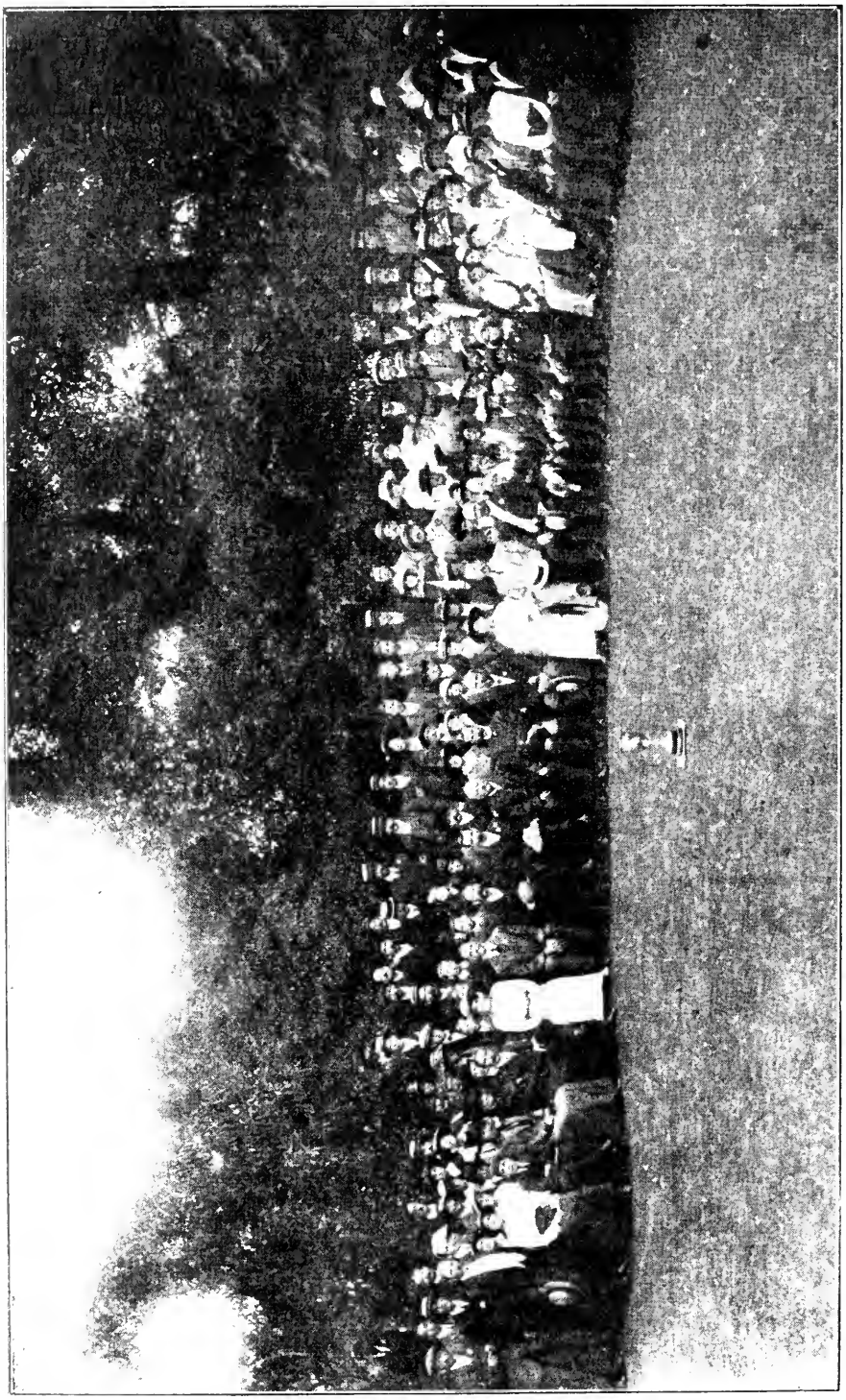
Mrs. Knight presented the prizes to the successful competitors, handing a cake knife (given by the Social Committee) to Mrs. Dewey, the first prize in the honey cake class; a nucleus hive (given by Mr. J. Hunt) to Mr. Prior, the winner of Class X. Mr. Dewey was the donor of a Section Rack complete, the first prize in Class VI.

The Bryden Challenge Cup was won by Mr. G. S. Baird (Erith), a comparatively new bee-keeper; a fact which proves that it is not always the old hands who secure the premier honours, and which should be an encouragement to other beginners. Mrs. Knight, in handing the cup to Mr. Baird, heartily congratulated him, and in reply Mr. Baird said that his success was a great surprise to himself, and he hoped that the cup would be the means of encouraging further competition in future years.

The special prize for novices was won jointly by Mr. R. Berrington (Erith) and Mrs. Holloway (Lewisham).

The "side shows" included a honey judging competition. Six samples of various grades of honey had been provided, and competitors were asked to place them in order of merit according to their judgment. The winners were: Lieut. Bartlett (9 points), Mr. Till (8 points), Mr. Keary (8 points), and Mr. G. H. Barnes (7 points). The winners of a frame building competition were (1) Mr. Dewey, (2) Mr. Minchin, (3) Mr. W. H. Prior, and (4) Mr. Reader. Another novel competition was a "guessing" competition, in which the competitors were asked to classify three samples by naming the sources from which they had been gathered. The samples were: (1) Clover honey, (2) Buckwheat honey, and (3) Propolis, but no one succeeded in naming them all correctly, most of the competitors failing at the two last samples. During the afternoon Mr. G. H. Barnes gave an exhibition of candy making, which proved very attractive. Messrs. J. Lee and Son made a very interesting exhibition of hives and appliances, and were in attendance to give expert advice to enquirers.

A hearty vote of thanks was accorded to



GROUP OF CRAYFORD AND DISTRICT BEE KEEPERS; THE BRYDEN CUP IN FOREGROUND.

Mr. C. P. Keenan, the conductor, and the members of the orchestra, and to Messrs. Paulin and Knight for arranging the musical programme. Mr. and Mrs. Knight were also thanked for allowing the use of their grounds, which undoubtedly added greatly to the success of the show. Votes of thanks to the ladies of the Social Committee, for arranging the refreshments, to the President for presiding, and to Mr. G. W. Judge (Hon. Secretary) and other helpers were carried with acclamation.

CORRESPONDENCE.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

THE INCUBATION OF BEES.

(*Continued from page* 282.)

It may be that when you remove the combs to your incubator, you substituted fresh frames of foundation or of empty combs. Seven days later, these will, in turn, be ready for your incubator, which already contains your first ten combs. You will, therefore, need another body box like the first, with perforated zinc tacked along the bottom, which may be tiered in your incubator, putting the first body, of course, on the top. With luck, therefore, which may be expected if prepared for, bees from the ten combs, full of brood, may be obtained every seven or eight days. These will well fill two hives. Drones and queens may, of course, be incubated with the worker bees.

2. I have some hopes that this may be a means of overcoming, to some extent, the "Isle of Wight" disease. If I am not mistaken, this disease occurs in, and is propagated by, the adult bee. If so, a hive of bees, every one of which has been incubated, will be entirely free of the disease. Everything that could be a means of infection having been previously destroyed or thoroughly disinfected, therefore a new start could be made with confidence. I hope to see the time when dealers will advertise hives of bees, every one of which has been incubated. I found that the bees may be placed direct out of the incubator into the hives which they are to occupy, some stores, of course, having been first placed herein, or they may be fed in the usual way.

3. Another use of incubation will, I think, be in preventing swarming. Suppose I have a hive which I think will be swarming very soon. I take my incubator-body down to the hive, and take out all the centre combs of the hive, or perhaps *all* the combs, and place them in the incubator, making sure that I have all the queen cells. These I may cut out if I wish, or place all, except one, in a portion of the body box separated apart by means of a division board. These may be useful in forming nuclei. Fertilised queens will be very useful and save much time in starting the new hives. Of course, in this case there will be unsealed brood, and possibly eggs in the combs one wishes to remove from the hive.

It will have been noticed, from what I have previously written, that some bees are permitted to remain on the combs in order to feed the unsealed larvæ. Their presence is not required to maintain the temperature, and few will suffice. After four or five days the body box may be again carried down to the apiary, if thought well, and these bees may be shaken or brushed off.

I do not know how long adult bees can be kept prisoners in the incubator, but apparently for several days at least.

As my incubator is longer than the body box, I have covered the perforated zinc which forms that part of the bottom of the incubator which extends beyond the body with sifted garden soil. I have placed there also a bottle of water inverted over a piece of wood, slightly hollowed to receive the neck, as a drinking fountain. I have made an exit from the hive into this little playground, which is intended also to be of use as a back yard. Two strips of wood, one inside of the incubator and the other near the top of the body box, serve to support a piece of glass. At each end of this I have glued pieces of perforated celluloid to serve as ventilators. The bees make but little use of this playground, which would probably be more used if the frames were end on to it. The bee gate is easily shut by means of a drop shutter.

It may be said that it is now too late this year to try incubation, and that at no time can it be made use of when supers are in use. This is not altogether the case. Messrs. Abbott, of Southall, near London, supply a rack of sections which allow incubation to be practised. They call it the "Benthall crate." It

consists of three separate racks of seven sections each, which are placed over the combs alongside each other. It is, I think, the most useful rack we have. It is so constructed that it is quite easy to remove a single section at any time. For incubation it suits admirably. You place a rack of seven sections over the outside frames at each end, leaving quilts over the brood nest, which is thus open to manipulation at any time. I hope to hear of experiments being made this year even yet, if only as a preparation for spring.

WM. J. SMITH.

[The rack mentioned above was in use a number of years ago, and was designed by the late Rev. G. Raynor, and known as the Raynor divisional rack.—EDS.]

THE EFFECTS OF DISINFECTANTS ON " ISLE OF WIGHT " DISEASE.

[9322] The correspondence in your columns as to the curability of " Isle of Wight " disease seems now to be taking a more serious turn. The later letters introduce a different atmosphere to the discussion, and therefore give promise of some real progress being made. I have, however, noticed that the Board of Agriculture has been mentioned now and again, and probably many readers look to this costly Government Department to solve the problem. It has no doubt added considerable information as to the cause of the disease, by its researches, but if the latest " explanation " it has to put forward is the only result of many years' work, it is evident that those beekeepers who still pin their faith to this Department will be " left." This remarkable document states that " a large number of substances have been tested and rejected for one reason or another," but at last it has " found two drugs which *appear* to have the power of destroying the parasite in the *early stages* of an attack." The italics are mine.

The drugs have to be given to the bees " at regular intervals and applied under proper supervision." All this gives one the impression that the bees require the attention of a trained nurse. The offer is made to supply a quantity of the drugs with directions for use in each case, " except where the disease is so bad that destruction is the only course."

I would like to ask why the Board of Agriculture would not test Bacterol, which I and such a large number of beekeepers all over the country have proved the most rapid and cheapest cure for this disease? Why, too, when cured bees were supplied at the request of the Board of Agriculture they were allowed to decompose before microscopical examination? Are the brains of the Board of Agriculture experts so stupefied by their own drugs that they will not test such a disinfectant as this? The Board proposes that an experiment should take place within a well-defined area containing not more than one hundred colonies of bees. Into the district selected, no new bees are to be introduced, and any invading or stray swarms are to be destroyed: there are a number of other impossible conditions. May I suggest that the most suitable place for such an experiment would be in the large ground of a well-known Institution for the feeble-minded.—SUBSCRIBER.

PEA FLOUR AND " ISLE OF WIGHT " DISEASE.

[9323] I was pleased to see one of your readers has tried the Pea Flour remedy for " Isle of Wight " disease with good results. My own bees still seem in the best of health. If the disease should return (as one of your correspondents thinks it will), and I lose them, I shall consider I have been well paid for the trouble I took in the spring, as I have taken over 30 lbs. surplus honey from them, which I consider very good considering the condition they were in when I started dusting them with flour. I hope some other readers will try the Pea Flour remedy and let us know the result, as in every case that I know of where it has been tried, as I directed in your issue of June 15th, it has proved successful. A twopenny packet of Pea Flour is sufficient for two hives. When I first suggested it locally it was ignored on account of its simplicity.

One well-known bee expert writes, " I should certainly advise bee-keepers to try it, as there is the following sound reason for its success." Although the disease is caused by a parasite (*Nosema apis*) the latter only flourishes under certain conditions, one of these being bad food, probably in the form of unwholesome pollen caused by damp. The bees will use the fresh flow instead of the inferior pollen, and thus will be removed, if not the cause of the disease, certainly one of the aggravating factors.—FRANK COE, Wisbech.

HIVING WILD BEES IN THE MIDDLE WEST.

[9324] In the BRITISH BEE-KEEPERS' JOURNAL of June 8th the author of the article on " Hiving Wild Bees in the Middle West " states they will be the descendants of the wild bees the pioneers meet, and were in the West before Columbus came. There are no native honey bees in the U.S.A. They were brought here by early settlers from England, Holland, Germany, etc.—WALTER C. MORRIS, Nepperham Heights, Yonkers, U.S.A.

QUEEN PASSING THROUGH THE EXCLUDER.

[9325] I wonder if it is generally known that "Vim" will thoroughly remove propolis from the hands. It may be well known to most bee-keepers, but as I only hit on it a little while ago I thought I might mention it, as it may be of use to someone.

May I ask if it is usually considered that a small virgin queen can pass through excluder (the ordinary zinc kind)?

I had a rather curious experience this summer. In working up two small swarms for wintering stocks, I placed the twelve or thirteen standard combs they were on in July above some large combs, 16 in. by 10 in., which I use as brood combs. I placed a sheet of excluder between so that there was no possibility of anything passing from top to bottom without going through the excluder. I must here say that the stock contained the beginnings of queen cells when treated thus. I then placed the queen below. About four weeks after I came to remove the standard combs for extracting, expecting to find them free of brood, and found a young queen laying. The old queen was also laying in the section below the excluder. This was the case in both stocks. In each case the original queen had got a mass of brood below the excluder, and the young queen had a good deal above. This brood has since hatched out, and produced *worker* bees. The queen was in each case a small one, and I may say that on finding her I carefully examined the excluder, and found that it completely covered the brood box, leaving no chink.—R. B. MANLEY.

[If a queen is small enough to get through the excluder before mating she will be able to do so any time during her life. The thorax will not be likely to increase in size after the queen emerges from the cell. The remarkable thing is that the queens should have left the hive to mate, and returned to the *upper* storey, without molesting the old queens.—EDS.]

PROLIFIC SWARMING.

[9326] Interested in the reports of other bee-keepers that have recently appeared in your Journal under the above heading, I venture to give you mine—a bee-keeper for one year. In July, 1915, a neighbour informed me a strong lot of bees were located in a hollow ash tree growing in a hedge of an adjoining field. Knowing nothing of bees myself, I offered them to a friend, an expert of many years' standing, if he thought it worth the trouble to get them out of the tree. Being himself an enthusiast, he induced me, with kindly offers of help and instruction, to start bee-keeping. By means of a bee-escape nailed on to the entrance, having first hung up a miniature hive containing three combs of brood, just outside, we secured a splendid lot of bees. Failing, however, to dislodge the queen, we procured a hybrid from Mr. Taylor, Welwyn. They were successfully removed into the hive in August, and fed up during the winter months, all went well. On May 15th last they swarmed, and again on May 17th, 19th, 22nd, 25th and 28th, so that in less than a fortnight I had six stocks, the original stock having given off five swarms. After this we submitted the combs to a careful examination, and to our surprise found twelve more queen-cells ready sealed. These we cut out, three queens hatching in the cardboard box into which we dropped the cells during the process. Since, the swarms have given me four casts, making nine in all since May 15th, from the parent hive. Examining the brood chamber of the first swarm recently, we found ten queen cells, which we cut out. In addition, the parent hive has filled and almost ready for extracting a full box of shallow combs: also hive No. 5. All the others have filled out well in the bottom chamber. The hives contain 12 brood combs and 9 frames with wide ends to each super. Can you explain? The hives have been under the constant supervision of an expert.—NOVICE.

"ISLE OF WIGHT" DISEASE.

[9327] One cannot help thinking it is put very tritely by Mr. Illingworth when he says he has "*more hope from the discovery of a drug which, being taken into the bees' intestines, would, without harming the bees, destroy or arrest the development of nosema.*" From laboratory experiments I believe I have such a drug. It appears to answer, and what I want now is some affected bees to experiment on. On hearing of any that the owners will submit to experiment on practical lines, I will forward, without charge, all material and particulars on condition that they report carefully the result.—E. C. M., 84, Stanmore Road, Birmingham.

POOR YIELD OF HONEY IN SOUTH SWEDEN.

[9328] The yield of honey this year in Skene will be much inferior to that of last year. More than half the bees died last winter, and the weather during the early part of this summer was unfavourable. A retail price of 2 kroner 50 öre is expected.—*From the "Social-Demokraten."*

NOTE.—Equal to 2s. 9¾d.; this is probably per kilo—or 1s. 3d. per pound.

NONA.

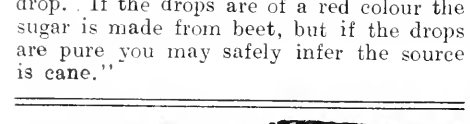
Queries reaching this office not later than FIRST POST on MONDAY MORNING will, if possible, be answered in the "Journal" the following Thursday. Those arriving later will be held over until the following week. Only SPECIALLY URGENT queries will be replied to by post if a STAMPED addressed envelope is enclosed. All queries must be accompanied by the name and address of the sender, not necessarily for publication, but as a guarantee of good faith. Correspondents are requested to write on one side of the paper only.

TEST FOR CANE SUGAR.

[9051] Can any of your readers tell me of a cheap, simple and reliable test to discriminate between beet and cane sugar? —H. W. LEAROYD.

REPLY.—We are told by chemists that when the sugars are absolutely pure it is impossible to distinguish between them by any chemical means. One simple test is to put some of the sugar in a bottle and tightly cork it. A glass stoppered bottle is the best. Allow it to remain in a warm room for several days, then open it and immediately smell. If it is beet sugar there will be a most unpleasant smell, but cane sugar will be practically odourless.

In the "B.B.J." for April 2nd, 1914, Mr. F. Newsham gives the following test:—"Apply a lighted match to a corner of a piece of sugar. The sugar will melt and drop. If the drops are of a red colour the sugar is made from beet, but if the drops are pure you may safely infer the source is cane."



Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. All questions must be accompanied by the sender's name and address, not necessarily for publication, but as a guarantee of good faith. There is no fee for answering questions.

POMONE (Birmingham).—*Brown Sugar for Feeding Bees.*—We have repeatedly stated in this column that brown sugar of any kind, even pure cane, is not suitable for feeding bees. The colour is caused by the molasses left in the sugar, and this is likely to cause dysentery.

Honey Samples.

S. SEAMER (Beds.).—No. 1 will be quite suitable for feeding bees. Add a little water and boil it. No. 2 is a good sample of fair density, mainly from clover with a little lime.

Special Prepaid Advertisements

Two Words One Penny, minimum Sixpence.

Will advertisers please read these Rules carefully in order to save trouble, as they will in future be strictly adhered to.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not permissible at above rate, but will be inserted at* 1d. *per word as* **"Business"** *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of* 3s. *per* ½in., *or* 5s. *per inch.*

PRIVATE ADVERTISEMENTS are only intended for readers having **Surplus Stock** *to dispose of.* **Driven bees, Nuclei,** *and* **Queens that are reared or imported for sale,** *are Trade Advertisements, and can only be accepted under trade terms.*

Advertisements must reach us NOT LATER than FIRST POST on TUESDAY MORNING for insertion in the "Journal" the same week.

Orders for three or more consecutive insertions in "The Bee Journal" entitle advertisers to one insertion in "The Bee-Keepers' Record" free of charge.

PRIVATE ADVERTISEMENTS.

TWENTY new lever top tins, 7lb., 10s. lot; ten strong single walled zinc roof hives, 5s. each; Porter escapes, slightly soiled, 1s. each; feeding bottles and stages, 1s. each.—X. Y. Z., "BEE JOURNAL" Office, 23, Bedford-street, W.C.

3 CWT. light English honey, 28lb. tins, 90s. per cwt, f.o.r.; sample lb., 1s. 4d., post free.—HULL, Cowsley-gardens, Notts-road, Derby. v 18

A FEW cwts. excellent light clover honey, 75s. per cwt., on rail, tins free; cash with order; sample, 3d.—EDGAR CAFF, Hillcoose, Grampound-road, Cornwall. v 17

FOR SALE, ½ plate Instantagraph, or exchange for honey.—FURNESS, Westgate, Halifax. v 16

REDUCING STOCK.—Queens, Dutch strain, prolific, 1916, 3s. 6d. each, in introducing cages: few lots driven bees to spare, 2s. per lb.—DAVIDSON, Market-square, Petworth. v 14

FOR SALE, eight dozen first quality sections, 96s.—R. S. WEBSTER, North Burton, Hunmanby, Yorks. v 12

PRIME healthy stocks of bees offered cheap.—VINCENT, 132, Croydon-road, Anerley. v 11

1 CWT. finest light Sussex honey, in 28lb. tins, 95s. per cwt; sample, 3d.; also in screw jars, 14s. dozen.—MISS PALING, Broadmere Common, Henfield, Sussex. v 10

WHAT OFFER? First grade, full, white capped sections, sample 1s. 3d; extracted, sample, 3d.—HUNT, Westmoors, Dorset. v 7

WANTED, several lots driven bees, *must be warranted* free from "Isle of Wight" or other disease; weight at least 4lb.; boxes not returnable.—State price, etc., to DR. KELSO, Broxburn, West Lothian. v 6

SIX strong stocks, with heavy stores, including skips, £1 each, or near offer, on rail; seen by appointment.—BAILEY, Plums Farm, Boxted, Colchester. v 9

THREE very fine young fertile queens, in introducing cages, 3s. each, post free.—ROLLINS, Stourbridge.

WANTED, about 1 or 2 cwt. honey in bulk.—DOLLIS PARK DAIRY, Church End, Finchley, London, N.

THE BEE-KEEPER'S CHEAPEST AND SAFEST INVESTMENT.

TO CURE EACH HIVE

OF BEES ATTACKED WITH ISLE OF WIGHT DISEASE

COSTS LESS THAN ONE PENNY

if you feed the bees with one teaspoonful of "Bacterol" (General) in one pint of syrup.

Much acrimonious discussion has been appearing in this Journal relative to differences of opinion as to whether this devastating disease is curable. The whole matter narrows itself down to this, that those who have the slightest doubt have not yet used "Bacterol." Its complete success is vouched for by many prominent Beekeepers, after thorough tests on the most hopeless cases. Such well-known authorities as the Editor of the *Bazaar and Mart*, Mr. E. H. Taylor, of Welwyn, Herts, Messrs. J. Lee & Son, Ltd., of Uxbridge, Middlesex, and many other experts recommend "Bacterol" as a definite cure.

Mr. W. Woodley, of Beedon, Newbury, one of the oldest and most respected Beekeepers in this country, wrote to the "B.B.J." (Aug. 31) that, after unsuccessfully trying other disinfectants and cures, he had quickly cured four stocks with "Bacterol" which would otherwise have died.

The bees like it, the cure is very rapid, and what is of remarkable importance, nearly every report speaks of it imparting to the bees a more vigorous life than they ever possessed before.

DIRECTIONS—Simply medicate syrup or spray bees with a weak solution. Medicate the bees' winter food and candy with a small quantity of "Bacterol" and your bees will be free from all disease.

"Bacterol" is the most potent yet non-poisonous disinfectant known to science. All its forms are non-corrosive, non-caustic, non-irritating, entirely free from objectionable odours, make clear solutions, and possess many advantages over every other Antiseptic and Disinfectant. You will find "Bacterol" (General) very useful in many other directions. (See Label.)

Send to-day a P.O. for **2**s. **9**d. for a half-pint bottle of "Bacterol" which is sufficient for several stocks and is highly recommended by and can be obtained post free from either of the following firms, which are so well-known in the bee world:—

"THE BRITISH BEE JOURNAL," 23, Bedford Street, Strand, London, W.C.

JAMES LEE & SON, Ltd., George Street, Uxbridge, Middlesex.

E. H. TAYLOR, Welwyn, Herts.

OR FROM THE MANUFACTURERS

BACTEROL, LTD., 19/25, BROOKSIDE RD., HIGHGATE, LONDON, N.

A ROLL OF HONOUR.

Although bee-keeping is considered a minor pursuit, we venture to say that it has provided more fighting men than the usual average of any industry. To place on record the part the members of our craft have played in the present war we propose to make a "Roll of Honour," and shall be pleased if our readers will forward us the NAMES and ADDRESSES, together with the REGIMENT and RANK, of any bee-keeper serving his King and Country at home or abroad; also if killed or wounded.

We print a further list of names to those sent in, and shall be pleased to have other names as soon as possible.

Pte. J. Ide, Luton, Beds.—R.F.C.

BRITISH BEE-KEEPERS' ASSOCIATION.

The Council of the British Bee-Keepers' Association are anxious to obtain gifts of honey for the wounded soldiers in the London Hospital, where it is urgently needed both for food and medicinal purposes. They will, therefore, be grateful for gifts of same, no matter how small, from bee-keepers throughout the British Islands. It is unnecessary to explain our obligations to these brave fellows, who have sacrificed health and limbs for the sake of our country. Gifts should be sent addressed to the Secretary, B.B.K.A., 23, Bedford Street, Strand. The donors' names will be published in the "B.B.J." and RECORD.

W. HERROD-HEMPSALL,
Secretary.

HONEY FOR LONDON HOSPITAL.

Amount already received ... 261½ lbs.

THE SEASON ON THE COTSWOLD HILLS.

The Editors' report on the honey crop and ruling prices is a timely one, because although in some localities bees have done well, taking the country through there cannot have been more than half a crop produced.

On the Cotswolds the majority of colonies did little besides swarm until July 15th, owing to the previous cool and showery weather, which was all right for producing a heavy population, but very little use in filling sections, with one fair day between two unsettled ones.

The white clover, brought to perfection by the rain, yielded heavily from late July onwards, and, in fact, I do not remember a late flow to be quite as heavy as it was on the hot days in early August, when a small June swarm filled twenty-one sections in nine days, and in all yielded a total of sixty-two completed sections.

The honey, though not particularly dense, is brilliantly clear and of beautiful flavour; and what is equally as important is the fact that most colonies have all their brood combs loaded with sealed honey to the extent of some 30lbs. and more.

So the bee-man will have very little use for sugar if he had it, and a little equalisation of stores should in most cases be sufficient to provide a few nuclei with enough food to winter on.

Honey seems to be selling pretty freely at 1s. 1d. and 1s. 2d. per 1lb. jar and section, and 7½d. and 8d. for ½lb. jars in the shops.

In comparison to other commodities the price of English honey is still only moderate, and the scarcity of sugar is undoubtedly tending to stimulate the use of pure honey to a greater extent than before. Indeed, there is every reason for this, since honey is the most wholesome and healthful sweet that can be had.

There is still a little honey being collected from the last of the white clover, the yellow charlock, with its rough, uneven-looking blossom in the turnip fields, and the purple willow-herb waving gracefully in the plantations; but on going into an apiary one misses that whirl of bees with the intensely vibrating hum, so familiar and pleasant on a hot July day, and one instinctively knows that the season is over.

On looking back we feel grateful for the heat-wave, which converted what might have been a disastrous bee year into a better one for honey than the season which preceded it.—A. H. BOWEN, Cheltenham.

BEE NOTES FROM DERBYSHIRE.

I have just come in from a ramble on the moors, but where are the bees? I went to a part of the moors where three years ago I found a lot of hives by following the bees in flight. To-day I spent three-quarters of an hour close to where those hives were, a lovely afternoon. Heather beautifully in bloom (but not such a purple mass as three years ago, and does not look like being), and, by the way, Tommy humble bee was at work on it. It must be fairly laden with honey, for there were

hundreds of them, but I had nearly given up in despair of seeing a hive bee on that part of the moor when—what was that? I can tell the hum of a hive bee in a tick. I bent down, and there was one solitary bee, its wings very badly chafed and worn. I wondered if it would be able to reach home with its load, for there was not a doubt it would be about a mile from home.

Where I have seen about twenty hives there was not one on that side of the moor. On the other side where I have seen nearly thirty there are five, and four of those were only taken up last Wednesday, but two of them had half-filled a super, and although it was a cool, windy day they were working for all they knew.

I had been wondering all the afternoon how it was Mr. D. Wilson had no bees there, but when I got back home I picked an old RECORD up someone had sent me, when the first thing I dropped my eyes on was, Sapper D. Wilson, so it is the war again as well as "Isle of Wight" disease that is keeping bees from heather.

I think about all bee men from Clay Cross side lost all their bees last winter, I can only find one place where bees have done well, and they had three stocks which have swarmed and swarmed again—they actually had a top swarm on August 10th. I could only wish I had it on yon moors now with a rack of sections over it. I took a small driven lot to the moors on August 10th, and heather was well out then. I saw five bees at work on it then. I call that very early. I have not had any bees for two years, till about July 16th someone sent me a small cast of Goldens, and they seem as though they mean living. They hived themselves in an old empty hive. I saw a golden bee flying about these old hives two or three days before they came, but I never dreamt any bees would come. How Nature has been trying to populate all empty hives! I know of three distinct places that have had bees come in July. Well, I put a bottle of food on mine, and they are doing well. That started the old bee fever again, and I had to go and buy another swarm, but they had been hived on foundation which had all dropped down. All the combs were as one, there was no parting them without breaking, so I got them on to six frames in a box and took them to the moors. They will get a bit there; they will do to join up to the others.

The cold wet June and early July caused clover to be very late round this part, but I never saw more; field after field a white mass of it. Those few who had any bees have had some full supers this year, at a time when other years the flow would have been over.—TOM SLEIGHT. Revell Street, Clay Cross.

SOUTH STAFFS. AND DISTRICT BEEKEEPERS' ASSOCIATION.

A meeting of the members of the above Association was held on Saturday afternoon, September 9th, at the apiary of Mr. E. H. Hipkins, Castle Mill Farm, Dudley.

Favoured with beautiful weather, it was suitable for inspecting the various lots of bees arranged in the bee garden, and it tempted a good number of visitors to attend; over 40 coming from different parts of the Association's district.

The arrangement of the hives showed great improvement since the Association first met there in 1913, and as the Hon. Sec., Mr. Joseph Price, intimated, meetings of this kind could not fail to do good to the visitors, and to the owner of the apiary visited.

It encouraged everyone to try and improve their apiaries and keep everything in order, as it should be when producing such a palatable food as honey.

While Messrs. Hipkins and Cheshire handled several stocks Mr. Price explained their various movements, and pointed out the absolute necessity of the bees being properly subdued before the combs were removed.

The main object for arranging the meeting was to demonstrate the use of the new cure for "Isle of Wight" disease by spraying the bees with "Bacterol."

It was stated that although this drug and another preparation called "Dioxogen" had given good results on diseased bees during the summer months, it has yet to be tested during the winter.

If every beekeper would give either one or the other of these remedies a trial at once we should soon know their true value as cures or preventives.

After an excellent tea had been partaken of in the open air, a general discussion of beekeeping topics took place.

Mr. Price was asked many questions, and in reply to some he said that he was proud to be associated with South Staffordshire Association. They had a district wrongly termed the "Black Country," which could produce honey second to none. The cinder heaps and pit mounds were now grassed over, and in the summer time bees revelled in the white clover which was so abundant. This season has been one of the best, although in the middle of July beekeepers were in the dumps because of the bad weather; since then it had been splendid. Some members report taking considerably over 100 lbs. surplus, in addition to a swarm.

Several members gave their experiences in dealing with "Isle of Wight" disease. Mr. Law said that he had obtained such

good results from Dioxogen that he was reluctant to try anything else, others reported equally good results from Peroxide of Hydrogen.

Mr. Taylor, of Edgbaston, made some interesting remarks on the using of the W.B.C. hive. Many persons spoiled the principle for which it was designed by packing the space around the brood box with sawdust, paper, chaff, or cork dust. He thought the effect of the Associations' work would tend to make beekeepers keep everything neat and clean around the beehives.

Mr. Price agreed that there was a great improvement in the way bees were kept since the Association started, but he regretted many non-members still kept the bees in a deplorable condition, in fact in some cases it appeared as though beehives were the best receptacles in which to keep all kinds of left off garments and rubbish.

A hearty vote of thanks to Mr. Hipkins for his kindness brought a pleasant meeting to a close. After the meeting some members took advantage of visiting the castle and caverns which were in close proximity.—*Communicated.*

HOW BEES MADE A CHERRY CROP POSSIBLE.

Mr. E. Whitcomb, a former president of the National Bee-Keepers' Association, and one of the prominent bee-keepers of Nebraska, reports in the *Independent Farmer* of May 25 how his bees made it possible for him to secure a big crop of cherries when other cherry-growers, without bees, secured none. He says:

"We had 300 bearing cherry-trees close to our apiary. During the blooming season there were two days during which our bees worked on these cherry-blossoms profusely. As a result we harvested 300 bushels of cherries when our neighbours two or three miles away, who had no bees, and whose trees bloomed as profusely as did ours, were compelled to come to our orchard for cherries."

Prof. M. B. Waite, of the United States Department of Agriculture, among other things he has given to the public on the subject of the relation of bees to horticulture, says:

"Out of 2,586 blossoms covered with gauze netting, only three apples set fruit. Of these the Baldwin, Spitzenburg, and Fameuse set some fruit. The Baldwin, which is often self-fertilised, gave four times better results when cross-pollinated. Cross-pollinated apples were larger, more highly coloured, and better supplied with seed."—From *Gleanings.*

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

QUACKERY AND BEE DISEASE.

[9329] Two champions of the Dioxogen nonsense made their appearance, metaphorically speaking, in the "B.B.J." of August 24th, and both are of the blind the Rev. A. H. Hollis has been attempting to lead.

Mr. William Thorne is wasting good money in his own and three other apiaries, and I can understand how angry my letter made him feel. Mr. Thorne says I am not "a true brother of a fraternity." I do not mind him saying that in the least. I am not troubled about fraternity. My concern is with the part apiculture should play in the industries of this country; and I can see that while quackery is rampant a satisfactory method of dealing with the epidemic will be postponed. As to Mr. Thorne's charge that I am actuated by jealousy, the idea is silly.

I am glad to find Mr. R. B. Manley seriously attempting to be critical. I can answer that I was not indignant with Mr. Hollis for giving his views; but I confess I thought an educated man should have taken a little trouble to understand what he was writing about, and to have exercised a little caution before rushing into print. I wished that Mr. Hollis had remembered the last line of the first verse of Tennyson's "Psalm of Life."

Mr. Manley seeks to put me through a short catechism. I am not unwilling to be catechised. The questions number four. To the first two I reply that I have no healthy stocks of bees, and that I have never got a stock through an attack of "Isle of Wight" disease. I may add that I have never known anyone else save a once infected stock, though there have been times when some people imagined they had done so.

Mr. Manley's third question is a paradox. "Does he suppose that *other* bee-keepers would be dissatisfied with a 'cure,' unless they could demonstrate by postmortem that no bee in the hive contains germs of

disease? " It is obvious that if one member of a stock contained the germs of disease that stock, taken as a whole as it must be, could not be a healthy stock, and that that one member would be capable of infecting the remainder. As it is impracticable to ascertain, without its destruction, that a stock is healthy, I should never think of saying of one (knowing that this disease is spread all over the country), " It is free from disease." It does not follow that because crawling bees and excreta marks are not found in the apiary at certain times of the year that the stocks are free from " Isle of Wight " disease.

In the last question Mr. Manley gives himself away, and shows that he is one of the blind, unless perchance the question were put merely for a rhetorical purpose. The reply to question No. 4 is that the cause of the disease was discovered independently on the Continent and in this country ten years ago, and has been known to the world for nearly eight and a half years.

Alluding to my longer article Mr. Manley says that as far as he can gather I know of no cure, or of any way of either preventing or checking the disease; in fact, can help in no way whatever. Mr. Manley should not "gather " in this fashion. As a matter of fact I have definite ideas as to the best way of dealing with the disease. The time has, however, not arrived when I care to expound them.—CHARLES H. HEAP.

"ISLE OF WIGHT" DISEASE.

[9330] Your correspondence columns have lately been enlivened by a discussion on the above subject, which has drawn forth many and varied opinions, some theoretical and others of a practical nature; some optimistic as to the future, others pessimistic. There is, however, no occasion for the latter attitude, as there is now overwhelming evidence to prove that this disease, which has baffled all previous efforts, is quickly curable. Bacterol, for instance, has been enthusiastically recommended in your columns by Mr. Woodley, of Beedon. The practical experience of a man so prominent in bee circles for so many years must carry far more weight than all the theories put forward. Further, his experience is confirmed by hundreds of others.

I thought, perhaps, a few scientific facts about Bacterol might interest your readers. It is the invention of two Italian chemists, both of whom have been made Members of the first-class of the Academy of Science in Italy—the highest scientific distinction which can be conferred upon a man in that country. There, Bacterol is used by the Senior Physicians to the King of Italy downwards, and it has gained many awards for its merits over every other antiseptic and disinfectant whenever entered in competition.

Bacterol (Medical) was introduced to this country about three years ago, and it was through seeing its remarkable effects in alleviating human suffering that induced a number of gentlemen to subscribe the necessary capital and form the present company, after receiving what may be called the equivalent to a grand jury's "true bill"—the sanction of the Treasury. Certain diseases, which have hitherto been regarded as incurable in humans and animals, have been found to respond to the Bacterol treatment, but as we are confining our attention to placing it before the Medical Profession, Veterinary Surgeons and Dentists, I will say no more on this subject, except to put forward the suggestion that the reason for its success resides probably in the fact that it possesses remarkable penetrative power, and can be used in sufficient strength to kill the micro-organisms causing disease without the slightest irritation. It also promotes granulation and then nature does the rest.

Returning to the subject of "Isle of Wight" disease in bees, the credit for the discovery that Bacterol (General) cured this, is due to Mr. Glen, of Chingford, followed by many successful tests on the most hopeless cases by Mr. Lee, of Uxbridge. That it should do so, however, is not surprising, because this disease is produced by a microbe which forms resistant spores, and sporing microbes are far more difficult to destroy with disinfectants than non-sporing microbes.

All forms of Bacterol have been shown by probably the greatest bacteriologist in this country to be particularly active against such spores, and as Bacterol, although so potent, is non-poisonous and non-irritating, it is perfectly easy to realise its effect upon the disease producing organisms throughout the alimentary tract of the bee. Similar effects are produced on humans and animals, but until Mr. Glen took the matter up, we had not given the subject of bees a thought, owing to having been so much occupied in other directions—especially with one of our great Departments of State, for whom a large number of experiments have been conducted. These give quite definite indication of solving the serious disinfection problems hitherto impossible of solution, and thereby saving the lives of many workers in controlled industries every year.

Bee experts now advise medicating the winter food and the candy supplied to the bees with a small quantity of Bacterol, in

order to ensure freedom from disease during the period of hibernation, and the usual spring losses.

I shall be pleased to answer any inquiries. J. G. Sparkhall, Managing Director, Bacterol Limited, 19-25, Brookside Road, Highgate, N.

A PROFITABLE STOCK.

[9331] Like your correspondent, W. Parsons [9305], I have been very fortunate with a lot of driven bees purchased last autumn. A few weeks ago they had ten boxes of shallow combs on at the same time, forming quite a small tower. Since then seven of the boxes have been extracted and 160 lbs. of their contents bottled, leaving some ten or fifteen lbs. in the ripener. I can perhaps hardly expect to take three more boxes, but am pretty certain of at least two, which should bring the total yield to somewhere near 2 cwt. The bees are "blacks," in a ten-frame hive, and beyond having drawn out shallow combs as required have had very little attention.—T. W. Townsend, Lydbrook, Gloucestershire.

A PROFITABLE COLONY.

[9332] I bought, early in the year, for 15s. each, two lots of bees. They were in ancient hives of ample proportions, and the bar frames had wooden ends and lacked wiring. I brought them home whilst the snow was still on the ground, for I was anxious to have some bees, as the peach trees were in bloom, and I had lost some forty or more colonies from Isle of Wight disease and the gale.

Later, from No. 1, I took away some of the old brood combs, and also fresh comb with this year's honey. Later on, I gave as many more new brood frames as I could on transferring the colony to a clean hive. I put on the excluder and two lifts of shallow frames, and later on a third. About the first week of July I took away two lifts, well filled, and gave them three more to fill. I was away from home until the first week in August, in the second week of which I took away four lifts, well filled, giving them another to fill. I have eight shallow combs in each lift, with wide metal ends and drone foundation. In the presence of a friend who was interested I weighed several of these. Some were over 6 lbs., others a good 5½ lbs.—one was 6¼ lbs. After extracting, the empty combs and frames weighed slightly less than 1 lb. each. All the shallow combs were well filled, and all seemed much about the same. The ones weighed were taken as they came. Therefore, in averaging the weight of extracted honey from each of the 48 combs at 4¾ lbs., I consider I am under-estimating. The honey in new comb and in the 8 old combs taken before supering and since was over 20 lbs., and I still expect to take some more honey when I close this one down for the winter.

Hive No. 1 has brought me in, therefore, over 248 lbs., has plenty of store and will need no feeding. I am expecting a further small take from it. Colony No. 2 was not so strong. It swarmed twice. The first was a 9-lb. lot and filled two lifts of shallow frames, and should have had more lifts. It has ample store for winter. The second swarm I was unfortunate with and it did not do much, but is going strong now. The parent hive gave only 15 lbs. of honey, but has ample store.

Honey I am selling at £5 12s. per cwt., and I would suggest to the fraternity that they are not wise in selling at prices that I see in the Journal—unless it is honey of inferior quality they are offering. Take the price of other commodities and the food value of honey and agree upon a standard price.

I wish to thank Mr. Hollis for what he says about Dioxogen, and if room can be found at a future date I will give my experience of "Isle of Wight" disease and the different treatments I have tried.—Kildare O'Neill.

EXPERIENCES WITH "ISLE OF WIGHT" DISEASE.

[9333] As one who has tried Mr. Hollis's remedy for "Isle of Wight" disease in bees, I write to say that I have done so with complete success. Mr. Hollis deserves the warmest thanks of all bee-keepers for his prompt publication of his great discovery. For it *is* a great discovery, and is destined to banish this dread disease from our midst. The effect on a diseased stock is really magical, and the remedy has the merit of being both cheap and easy of application. I lost more than a third of my stock, and it looked as if all must go; but to-day they are apparently quite healthy, and are fast regaining their lost strength. I mean to re-spray them before packing up for the winter, just for my own satisfaction, for it must be remembered we are still at the experimental stage, though I feel confident that it is going to prove completely successful. Before trying Dioxogen I considerably *checked* the disease by whitewashing the insides of hives with lime and spraying bees and combs with a good disinfectant, but I give Dioxogen the whole credit for the *cure*. It *cures the diseased bees*, a thing pronounced impossible by experts, or at least not done, and, of course, the root of the whole matter. I again thank Mr. Hollis for the great service he has rendered to the bee-keeping

industry. I note with pleasure that Mr. Woodley, Beedon, has found "Bacterol" effective, and that he, too, has been good enough to publish the fact. Very likely we shall now have several efficient remedies for this dreadful malady. It was high time, if any bees were to be left us. I believe that what has hitherto strangled experiment has been the generally accepted invincibility of the disease, the axiom of so many experts being that fire was the only remedy. Here, at least, our Scottish investigators score a point, maintaining, as they do, that "Isle of Wight" disease does not always end fatally. I myself had three stocks that never showed any outward symptoms of the disease, though side by side with those that were fast dying off. —A. E. McINNES.

A READER'S THANKS.

[9334] Will you allow me, through the medium of your valued Journal, to express my thanks to the Rev. A. H. Hollis for his kindness in making known so freely what, in my case, has proved to be a cure for the "Isle of Wight" disease. I had a stock given me the beginning of August that was very badly affected. The bees partly covered two combs, and had about twenty cells with brood in them. After reading Mr. Hollis's letter I followed his advice, and now I find the two inside combs are full of brood, and they have several pounds of honey. At present I see no signs of disease.—J. S. ANDREW.

ECHOES FROM THE HIVES.

At the beginning of this year I had two hives of Italian bees, one a strong stock and the other a stock on five combs only.

As I wished, if possible, to prevent swarming I gave the strong stock, on May 18th, a second brood chamber, the queen having thus the run of 20 combs.

On the 29th of May I put a shallow frame rack on this hive. Bad weather, however, followed, and the bees stored little honey. Late in June the weather improved, and on the 25th a large swarm issued (nearly 8 lbs.), which settled on a fence with a bramble growing over it and with several obstacles in front. The swarm was, despite the difficulties, successfully hived by a friend to whom I had given it, but to our great surprise it was found early in the evening to have left the hive. An examination of the original stock showed that the bees had returned, and we could only think that the queen must have been left behind on the fence, and gone back to the old hive.

On the 5th of July the same hive sent out a swarm of over 7 lbs., followed on the 9th by a 4 lb. 6 ozs. cast. The other hive had now built up into a strong stock, and on the 14th of July threw off a swarm of about 4½ lbs.

The honey flow now commenced in earnest, and on the 31st of July I took the top brood chamber (which had previously been separated by queen excluder) off No. 1 hive. This yielded 38½ lbs. of fine honey. From No. 2 hive I took 24 lbs. on the 19th of August, and on September 2nd a second rack of 19½ lbs. from No. 1 hive, making a total of 82 lbs. of honey from two hives, in addition to swarms weighing about 16½ lbs. The last swarm I kept myself, and it has built out into a strong stock on nine combs, with sufficient stores for the winter.

The first swarm has done rather badly. It was hived on shallow frames with bad foundation, which broke down. More shallow frames were given owing to a standard brood chamber not being then available, but the foundation again caused trouble, breaking away badly so that the combs were joined together by the bees in great confusion. On my advice standard frames, fitted with good foundation, were supplied, and when the queen had gone down an excluder was put between brood chambers and rack above, which has since been extracted, giving about 14 lbs. of honey. Owing to these drawbacks this swarm has not thrived, and now covers only about six combs. The second swarm has done well, and is now in fine condition with plenty of stores for the winter.

All things considered, I think that the bees have done very well in a town district.—H. W. ROUND, Catford.

I thought it might interest you to know the sort of "bee weather" we have had here in the South during July.

I hived a stray swarm of bees I found in an oak tree about one mile from here on July 17th in the evening, so that they did not start work until the 18th. I gave them six frames for a start, with a very small piece of foundation. On the 24th a small swarm came off, which I hived on four frames. I then gave the parent swarm two more frames and an improvised rack of 12 sections, as I found the six combs were drawn out and full of honey. On August 6th I took off the 12 sections sealed, some of them weighing 1 lb. 3 ozs. All the eight combs were full up, and they had built comb on the dummy. All this was done in the short space of 19 days. They appear to be an Italian bee; the lower half of body is a golden colour. I have four stocks of Dutch which have also done remarkably well, but not quite at this pace.—W. DUFFETT, Petersfield, Hants.

Queries reaching this office not later than FIRST POST on MONDAY MORNING will, if possible, be answered in the "Journal" the following Thursday. Those arriving later will be held over until the following week. Only SPECIALLY URGENT queries will be replied to by post if a STAMPED addressed envelope is enclosed. All queries must be accompanied by the name and address of the sender, not necessarily for publication, but as a guarantee of good faith. Correspondents are requested to write on one side of the paper only.

WINTERING QUERIES.

[9052] I have two hives purchased as they stand last November. Both are strong, with good stores in brood frames of body box. On one is a rack of shallow frames; on No. 2 a rack of sections. Yet in neither case have bees drawn out the combs. Is this a fairly common experience among other beekeepers in the West Riding of Yorkshire?

Earlier, during the wet month of July, I found the bees, through their enforced inactivity, had eaten all their stores. I tried every shop in town for *cane* sugar but was unable to get it, and finding bees dying through starvation, I fed with whatever sugar (white) I could get.

With regard to wintering:—

(1) Will it be right to leave them sufficient honey or would such honey, after feeding with what was most likely *beet* sugar, cause dysentery?

(2) If I follow Simmin's advice and remove all natural stores, how much candy (or syrup, if any) would be needed for wintering?

(3) If I remove the honey, which is heather honey, it would mean breaking down the combs, as it cannot be extracted. How should I proceed then?—SPRINGCLOUGH.

REPLY.—(1) Leave them the stores they have. If the sugar was a good quality white sugar there will probably be little or no dysentery. Better risk the possibility of a little dysentery than certain death from starvation. (2 and 3) Do not on any account remove honey from the brood combs. You would have to destroy the combs in order to get the heather honey out, and this would necessitate the bees having to build new ones. For this work the season is too far advanced. There is also the difficulty, expense and delay in obtaining sugar to be taken into consideration.

Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. All questions must be accompanied by the sender's name and address, not necessarily for publication, but as a guarantee of good faith. There is no fee for answering questions.

LABOURER (Driffield).—*Mixing Wax and Propolis.*—You cannot avoid getting a certain amount of propolis among the wax when scraping sections or frames. When the wax is extracted and allowed to cool with water under it the propolis and other impurities will be found adhering to the underside of the cake of wax and should be scraped off.

H. LEWIS (Barnstaple).—*Spraying Wet Extracted Combs with Bacterol.*—Before giving the bees the wet combs to clean up it is a very good plan to spray them thoroughly with Bacterol or Izal. The bees will clean them up all right.

Special Prepaid Advertisements

Two Words One Penny, minimum Sixpence.

Will advertisers please read these Rules carefully in order to save trouble, as they will in future be strictly adhered to.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not permissible at above rate, but will be inserted at* 1d. *per word as* "**Business**" *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of* 3s. *per* ½*in., or* 5s. *per inch.*

PRIVATE ADVERTISEMENTS are only intended for readers having **Surplus Stock** *to dispose of.* **Driven bees, Nuclei,** *and* **Queens that are reared or imported for sale,** *are Trade Advertisements, and can only be accepted under trade terms.*

Advertisements must reach us NOT LATER than FIRST POST on TUESDAY MORNING for insertion in the "Journal" the same week.

Orders for three or more consecutive insertions in "The Bee Journal" entitle advertisers to one insertion in "The Bee-Keepers' Record" free of charge.

PRIVATE ADVERTISEMENTS.

TWO young Dutch queens, 3s. 6d. each.—G. HALL, Jun., 2, Borough, Hinckley. v 26

1½ CWTS. light honey, in 28lb. tins, 90s. per cwt.—J. WILKIE, Coaltown, Kingskettle, Fife. v 23

FRED PECKETT omitted address when sending for sample to HUNT, Westmoors, Dorset. v 22

SECTIONS, 12s.; screwcaps, 12s. per dozen, packed on rail; White Runner drakes, 5s. each; White Leghorn cockerels, Padman's 285-egg strain, from 4s. upwards.—BARNES, Clogger, Wigton, Cumberland. v 21

FOR SALE, ½ plate Instantagraph, or exchange for honey.—FURNESS, Westgate, Halifax. v 16

DON'T WASTE TIME & MONEY

in experimenting with "freak cures" for Isle of Wight disease.

THIS disease is produced by a microbe which forms resistant Spores, and sporing microbes are far more difficult to destroy with disinfectants than non-sporing microbes. Reports of one of the greatest University Bacteriologists in this Country show that a 3 per cent. solution of Bacterol (General) will penetrate large bundles of tightly bound horse hair and kill resistant Anthrax Spores embedded in the centre in 21 hours, without in any way altering the physical properties of the hair. No other disinfectant known to Science can accomplish this.

In using "Bacterol" therefore you are employing the most potent bactericide having a definite action on Spores but which at the same time is Non-Poisonous, Non-Corrosive, Non-Caustic, Non-Irritating, entirely free from objectionable odours, and possesses many advantages over every other antiseptic and disinfectant.

The bees like it, the cure is very rapid, and what is of remarkable importance, nearly every report speaks of it imparting to the bees a more vigorous life than they ever possessed before.

CURE YOUR BEES NOW AND PREPARE FOR THE WINTER.

DIRECTIONS.

UNTIL HIBERNATION simply medicate syrup with Bacterol (General) or spray bees with a weak solution.

FOR WINTER FEEDING. See that the food and candy is medicated with a small quantity of Bacterol (General).

A few of the large number of successful reports have been published in the "B.B.J."

Send to-day a P.O. for **2s. 9d.** for a half-pint bottle of "Bacterol" which is highly recommended by and can be obtained post free from either of the following firms, which are so well-known in the bee world:—

E. H. TAYLOR, Welwyn, Herts.

"THE BRITISH BEE JOURNAL," 23, Bedford Street, Strand, London, W.C.

JAMES LEE & SON, Ltd., George Street, Uxbridge, Middlesex.

OR FROM THE MANUFACTURERS

BACTEROL, LTD., 19/25, BROOKSIDE RD., HIGHGATE, LONDON, N.

BRITISH BEE-KEEPERS' ASSOCIATION.

The monthly meeting of the Council was held at 23, Bedford Street, Strand, London, W.C., on Thursday, September 21st, 1916. Mr. W. F. Reid presided. There were also present Miss M. D. Siller, Messrs. A. G. Pugh, G. W. Judge, G. Bryden, A. Richards, J. Smallwood, C. L. M. Eales, G. J. Flashman, J. Herrod-Hempsall, G. R. Alder, J. B. Lamb, Association representatives, G. Horsecroft (Essex), W. W. Prior (Crayford), and the Secretary, W. Herrod-Hempsall.

Letters expressing regret at inability to attend were read from Messrs. T. W. Cowan, T. Bevan, and Sir Ernest Spencer.

The minutes of the Council meeting held on June 29th were read and confirmed.

Miss H. C. Lenanton, Miss H. M. B. Thrupp, and Mr. A. Brain were elected members, and Mr. W. Valon was accepted as the representative of the Staffordshire Association.

The report of the Finance Committee was presented by Mr. J. Smallwood, who stated that payments into the bank were July £12 14s. 1d., August 15s.; the bank balance being July £124 10s. 4d., August £125 5s. 4d. Payments amounting to £52 7s. were recommended.

Reports on preliminary examination held at Tolpuddle, Bridgwater, Henwick, Kendal, Old Hill, and Swanley were presented, and it was resolved to grant certificates to the following:—Misses M. Bartholomew, A. Donaldson, K. D. Rudge, R. Hudson, S. Harvey, E. Haines, B. J. W. Jervis, A. Langley, M. Mann, E. Martin, B. Murray, A. Morlet, J. Norris, P. Owen, O. Rudolf, K. Sutherland, E. Tufnel, M. Wall, G. Warrick, E. Wimbush, E. Yeatman, P. Carlisle, M. Catchpole, M. Easton, F. Hardy, M. Hawkins, B. Josephy, P. Newman, E. O'Grady, J. Penrose, A. Richardson, M. Saunders, B. Twigg, M. Watts, D. Willett, D. Atkins, M. Watkin, K. Garrett, Mrs. S. Park, Messrs. P. V. Lecke, E. W. Hipkins, A. Cheshire, W. Hildreth, J. Reader, A. Kimpton, G. Millward, G. Chatham, S. Lafford, and S. A. Bradbury.

The report on the lecture test for expert certificates held earlier in the day was presented by Mr. C. L. M. Eales, and it was resolved to grant the certificate to Mr. E. Hollingsworth.

It was resolved that owing to prevailing conditions no conversazione be held in October.

The intermediate examination was fixed for November 24th and 25th.

A letter was read from the Crayford and District Association *re* the conditions attached to "The Bryden Challenge Cup" presented to that Association. It was resolved to thank Mr. Bryden for his public spirit in presenting such a beautiful practical gift for the benefit of bee-keeping, and that, should it ever be necessary, the British Bee-keepers' Association would undertake the responsibility detailed in the conditions.

A long discussion followed on the matter of procuring sugar for the use of bee-keepers, and eventually it was decided that under the present conditions of shortage for the general public it would be inadvisable to approach the Government in the matter. Bee-keepers themselves are strongly advised to place their orders for sugar some time ahead of the period it is needed, either for syrup or candy making. As the orders are supplied in rotation by all sellers they will then obtain, if not all, a part of what they require. Next meeting of Council, October 19th, 1916, at 23, Bedford Street, Strand, London, W.C.

OBITUARY NOTICES.

Our readers will be sorry to hear that Mr. J. B. Lamb, a member of the B.B.K.A. Council, has had a son, who was training as an air pilot, killed in an aeroplane accident. The machine which he was piloting capsized on landing, and Lieut. Lamb was killed.

Mr. Lancelot Quale, the well-known bee-keeper of Glen May, in the Isle of Man, has also lost his only son, Corporal Gordon Quale, of the Black Watch, who was instantaneously killed whilst gallantly leading his platoon in an attack on the German trenches. Ten days earlier Mr. Quale received the sad news of the death of his brother, Pte. F. Quale.

CONWAY HONEY FAIR.

The Conway honey fair was held on September 13th, having taken place on the corresponding date every year since time immemorial. Several stalls of honey and wax were to be seen in the High Street, and a double row of stalls of other sweetmeats, crockery, and so forth in Castle Street. In the course of the day a good number of the country people, as well as residents and visitors in Llandudno and Colwyn Bay, visited the quaint old town. The price of honey in jars was 1s. 6d. a pound.

BRITISH BEE-KEEPERS' ASSOCIATION.

The Council of the British Bee-Keepers' Association are anxious to obtain gifts of honey for the wounded soldiers in the London Hospital, where it is urgently needed both for food and medicinal purposes. They will, therefore, be grateful for gifts of same, no matter how small, from bee-keepers throughout the British Islands. It is unnecessary to explain our obligations to these brave fellows, who have sacrificed health and limbs for the sake of our country. Gifts should be sent addressed to the Secretary, B.B.K.A., 23, Bedford Street, Strand. The donors' names will be published in the "B.B.J." and RECORD.

W. HERROD-HEMPSALL,
Secretary.

HONEY FOR LONDON HOSPITAL.

Amount already received ... 261½ lbs.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

MARKETING HONEY.

[9335] What an awful pity to see in the "B.B.J.," month by month, that an average of £30,000 is sent out of the country for honey, when plenty of honey of better quality can be produced in the British Isles and Channel Isles.

I read, with interest, the correspondence in the "B.B.J." some time ago on this subject, but it seems to have been dropped where it began.

Why do not all beekeepers at home wake up? While they sleep the colonial and foreign beekeepers are reaping a rich harharvest, and laughing up their sleeves.

To begin with, a central depôt would have to be formed for the wholesale merchants to purchase their supplies from.

I think the best plan would be to approach a salesman in one of our large markets. Some months ago I saw an article in one of the daily papers from one such merchant, saying he would be willing to deal with honey if it were sent him in sufficient quantities. Unfortunately I have mislaid the paper, but am writing to one or two salesmen on the subject to obtain their views.

Of course there is the danger of poor quality honey being sent, thus spoiling the trade. Well, for this, the best plan would be a rule that every jar or section must bear a label with the name and address of the producer, together with a guarantee of purity.

Now then, beekeepers, wake up! Let us see if we cannot crowd all this foreign rubbish called honey out of the market.

I should like to hear what my brother (and sister) beekeepers think of my suggestions.

Now comes the ever prominent question of "Isle of Wight" disease. I feel quite convinced that Izal is THE cure, and I only wish every beekeeper would use it thoroughly. I have no disease in my apiary, but still I use Izal daily. When bees are flying I give them a cloud of spray; I also spray the hive front and ground round the hives. I use a rose spray, which can be purchased at 2s. 9d. from any florist; it will last a lifetime, as there are no parts to get out of order I use one teaspoonful of Izal in one pint of water. Occasionally I give the bees a little spray between the combs, when opening hives.—F. NEVILLE COLEBROOK.

EXPERIENCES WITH "ISLE OF WIGHT" DISEASE.

[9336] While various remedies have been suggested for curing "Isle of Wight" disease, no one seems to have questioned that unless all the parts of an infected hive are destroyed, or thoroughly disinfected, and the soil round about dug over, a fresh stock established at the same place will be sure to contract the disease; and yet I know of at least three instances in which swarms have settled in uncleansed hives and have flourished.

I may mention a somewhat curious experience of my own.

In 1915 I lost two stocks, apparently by "Isle of Wight" disease, and a third looking suspicious, I got our expert to inspect it. He had the bees smothered, frames, quilts, etc., burned, and the hive disinfected. He is a very clever man with bees, but with his more recent experience I doubt whether he would order the destruction of a stock similarly attacked this year.

I got a new stock, with hive complete, last Christmas from a man going abroad, and it worked well up to about the middle

of May, storing about 10 lbs. of honey in the super. Then the bees began to die off all round, 50 to 100 in a day, for about six weeks. At first I thought it was only the old bees giving place to newly-hatched ones, but it went on too long for that, so I started by disinfecting the ground with lime, and afterwards sprinkled the alighting board frequently with Izal. Whether this cured the disease, or whether the deaths were not caused by Isle of Wight disease, I saw no more dead bees lying about, and since then—that was about the first week of July—they have worked as well as bees could work. Including the 10 lbs. stored in May, I have taken out 46 lbs. of honey, and in the brood chamber there are six combs of solid sealed honey, besides four combs with brood and a little honey in them.—J. D. MOORBURN.

THREE SEASONS' EXPERIENCE WITH ITALIANS.

[9337] During 1912 and the winter which followed, " Isle of Wight " disease made a clean sweep of all the bees in this district. Among the stocks that perished was one that had for a generation made a home in a hollow tree outside the village.

1913, I and my two bee-keeping friends here spent in destroying, disinfecting and cleaning up, preparatory to making a fresh start.

1914. After a few " bee chats," we decided to test the conflicting statements then being made respecting the immunity, or otherwise, of the foreign races, the question of immunity being paramount owing to the apparent helplessness of the natives. Part of the plan was to re-queen each stock with its own native queen in the autumn to ensure purity of race. The war, however, interfered with this part of the scheme, but we secured six Italian queens from Signor Piana.

During June we bought four swarms—two Italians, weighing 6 lbs. each; one Dutch, 4 lbs.; and a small Carniolan, 1¾ lbs. These were each headed by a pure queen of their particular race.

The two Italians increased to four, and gave a surplus of 270 lbs. One of the swarms decamped, and was found a week later on the old, diseased combs in the hollow tree before mentioned. They were recovered and brought back. The young queen resulting from the other swarm mated with a Dutch drone, and a hybrid stock resulted. The other three stocks were re-queened in the autumn with imported Italian queens.

The " Dutchmen " increased to three, and gave a surplus of 90 lbs. Two of the stocks were Italianised in August, the other being left with the old Dutch queen. After re-queening, " Isle of Wight " disease appeared in all three lots. The one with the Dutch queen was destroyed, but the two Italianised lots were allowed to " wait and see." The Dutch bees died off rapidly, and with them, apparently, disappeared the disease.

The Carniolans, being a small lot, gave no surplus, but gradually built up into a strong stock for winter. This was Italianised in August.

Seven healthy stocks were packed down for winter, six headed by Italian queens, the other being headed by the Italian-Dutch hybrid.

1915. Six stocks passed the winter in a normal condition. The other, an Italian, was queenless. As the spring advanced the hybrid stock developed such a ferocious temper as to justify destruction, and was accordingly destroyed. The Italians increased to ten stocks, and gave a surplus of about 800 lbs. Maiden swarms were returned. A late stray swarm of natives clustered in one of our apiaries. The black queen was removed and a virgin Italian substituted. She, however, mated with a black drone in the swarm, and another hybrid stock resulted, and being unable to import Italian queens this could not be corrected. In the autumn two of the Italian stocks showed the " spread " wings symptoms of the " Isle of Wight " disease, but the disease did not develop beyond this stage. (It may be mentioned that the " spread " wings are taken here to indicate the first and mildest stage of the disease. The " detached," or " fimbriated," wings, when the bees are generally unable to fly, and become " crawlers," are regarded as a development.) Ten Italian stocks and one hybrid stock were packed for winter.

1916. All but the two diseased stocks wintered in a normal condition. The winter mortality in the two diseased stocks was abnormal, and consequently their condition in April may be described as " weak " and " very weak " respectively. The former, being headed by a young queen, soon picked up, swarmed, and has given a good surplus. The latter, headed by an old, imported Italian queen, made no headway for a long time. It subsequently re-queened and made progress. An imported Italian was introduced in July. This, now, is the only stock that shows no signs of " Isle of Wight " disease and in view of the controversy now going on in the BRITISH BEE JOURNAL respecting cures, the following may be mentioned:—Eight years ago the junior editor gave the writer some formalin solution with which to treat some foul brood cases. Some of the solution was left, and

a saucer full of it, as long as it lasted, was kept under the perforated zinc floorboard of the above affected stock. For three or four days after the solution was first introduced the alighting board was covered with thin, streaky excrement. This was washed off, and no more of it has been seen. Is this another "cure"? Anyway, the stock is now strong and healthy, and to date has given 30 lbs. surplus. Perhaps Mr. Herrod-Hempsall will give particulars for making the solution. [It was simply a 10 per cent. solution of pure formalin.—W. H. H.]

The hybrid stock has been affected with the disease in the crawling stage all through the spring and summer, and has just died. The Italians have increased to 20 stocks, and all with the above exception show the "spread" wings. Several swarms have been returned, and there have been two drone-breeding queens. We are overstocked, and a reduction will be made. Those left will be re-queened with imported Italian queens. The surplus cannot yet be given, but it will be a good one.

Such is a brief and unbiassed statement of our doings with *some* foreigners. On the question of immunity from the "Isle of Wight" disease, to test which was the sole cause of their adoption, readers can form their own opinion. We have done well with them on the whole, and we also, prior to the advent of the "Isle of Wight" disease, did well with the natives. In another letter, with the Editor's permisson, a few remarks on the characteristics of the Italians, and a comparison with the natives, with some notes on management, based upon three seasons' experience, will be given. It will there be seen that the Italians have not got it all their own way. —W. H. WHITE, Harlington, Beds.

"ISLE OF WIGHT" DISEASE.

[9338] Owing to having to catch a train to the North and to my having therefore very hurriedly dictated the letter (9330) which you kindly published in your last issue, I find I inadvertently omitted to mention one name in connection with the tests with Bacterol in curing "Isle of Wight" disease. The importance of the discovery is one thing and its thorough testing before recommendation to others is equally important. In this latter connection may I add to the names given last week that of Mr. E. H. Taylor, of Welwyn, Herts, who, sceptical at first, made several successful experiments, and finally became as enthusiastic as the others.

One other point, apart from its efficiency, the Bacterol treatment is by far the cheapest method. The curing of each stock usually costs less than ½d.—never more than 1d.—J. G. SPARKHALL, managing director, Bacterol, Limited, 19-25, Brookside Road, Highgate, N.

MR. HEAP AND THE TREATMENT OF "ISLE OF WIGHT" DISEASE.

[9339] I was surprised to find that Mr. Heap, on page 296, puts me down as a "champion of the Dioxogen nonsense." I can only reply (to borrow Mr. Heap's style), Nonsense! I know nothing about the stuff. I wish to keep an open mind, and had no idea of "attempting to be seriously critical" of Mr. Heap, not being among the prophets. I have no diseased stocks, but five or six years ago I had ten stocks smitten with "Isle of Wight" disease, or so it was said at the "B.B.J." office when I sent a number of bees up for examination. These became quite healthy after being fed solid with medicated food in autumn and again fed in spring. I saw no sign of the disease in them for at least three years after. I also kept disinfectants continually in the hives. I thought this cured them, I may be wrong, or perhaps, as Mr. Heap suggests, I only *imagined* they were cured. I did not microscopically examine each bee, so probably he would not be satisfied; at any rate, they did well, and I remember the following year one of these stocks gave me over 200 lbs. of extracted honey, in addition to a show wood and glass super, which took first prize at the Northants B.K.A. show. I also remember, by the way, that the Editor of this paper remarked what waste of energy it was to have bees work out glass supers!

Well, to return to Mr. Heap and his letter. I did not intend to criticise him seriously, but thought I might have shown him what he seems to find so difficult to see, and what is so apparent to others, i.e., that since he cannot cure the disease and has nothing more tangible on the subject to offer than "definite ideas," whatever *they* may be worth, it is quite out of place and goes against the grain to many of us for him to write in the style he has adopted on this subject.

Let us suppose that Mr. Heap puts his ideas into practical shape, and that I or anyone wrote letters without having tried his "remedy" (I suppose Mr. Heap has not tried Dioxogen; I think the scornfulness of his letters warrants my taking this for granted) warning people not to waste time or money on "the Heap nonsense," what would Mr. Heap think of it?

With regard to my questions, No. 4 included, I did not put them in for "rhetorical purposes," whatever is meant by that, but for reasons probably obvious to

everyone but Mr. Heap. Of course, I know the tale of the microbe by heart, but was this *created* 8½ years ago?

I should wish to tender my apologies to Mr. Heap for having "gathered" from his letter that he knows of no cure. I confess that is about the only thing I did manage to gather. But when one comes to consider that he has no healthy stock and has never cured one or seen one cured, I think I may be forgiven. I can only say I misunderstood him. He knows all about it apparently, but will not condescend to use his knowledge. One *is* apt to jump to conclusions.

I never took Mr. Heap seriously, but wrote because I thought he should not be allowed to write unanswered letters of the nature of his latest, which "border or remotely verge on the confines" (like Mr. Brass) of insolence. I fear Mr. Heap suffers himself from a disease which is very difficult to cure, namely, acute egoism.—R. B. MANLEY.

QUEEN EXCLUDERS AND PROLIFIC STOCKS.

[9340] I have followed with great interest the correspondence on the articles under "Prolific Stocks," and also "Wire Queen Excluders," as I have myself some very good queens, and also use Wilkes' excluders "exclusively." Taking the excluders first, I admit they might be made more strongly with great advantage, and the suggestion of Mr. Manley to fit more cross-piece clips would be a great improvement, but with regard to frailty, I think a lot of damage is done in taking off, when they have been fastened down by the bees with wax or propolis. This difficulty would be greatly overcome if all users would vaseline them well before putting on, or, better still, have them framed with a very thin frame and vaselined as well.

As to the queens being able to pass through them at will—well, I should think that is the bee-keeper's own fault. If his queens were anything like mine they would have a difficulty in getting through a distorted wire—let alone a good straight one. He should keep queens that *are* queens, and I will promise him—provided he looks after her requirements and gives her plenty of room by either extracting outside combs if choked with honey or giving sheets of foundation and removing combs of brood to other stocks, or even another brood body *below*—that he will find she will not even attempt the perilous experiment of struggling against the excluder.

With regard to the prolific stocks, I will give you details at the end of the season (if I am not called up for the Army). But here is the short history of one!

No. 5 HIVE.

June 6th.—Made nucleus; 2 combs brood, 2 queen cells, 2 frames foundation.
June 9th and 10th.—Working hard, carrying pollen.
June 15th.—Eggs.
June 19th.—Added 3 frames foundation.
June 22nd.—Added 2 frames foundation—all others fully drawn and full of eggs.
June 27th.—Gave 10 frames foundation and supered.
Bad weather intervened, but sections nearly complete on July 20th.
July 21st.—Swarmed. Removed 3 combs brood with queen cells, and gave 3 frames foundation full sheets. Returned swarm, put on two more racks of sections.
August 3rd.—Removed 3 racks sections, *all* completed, and filled out to the wood; first class, 63lbs. Gave super, 8 shallow frames, full sheets foundation and one rack sections partly worked from another stock.
August 10th.—Sections completed, 21lbs. removed. Shallow combs filled right up but not capped. Gave 3 racks empty sections—starters.
August 17th.—Extracted 40lbs. from shallow combs and returned combs under sections, all of which are drawn and well on the way to completion. Total honey to date 124lbs., and still working well. Stock is only 10½ weeks old.

Does this create a record? I have other stocks doing nearly as well.

I should particularly like to point out the queen is one raised from the stock (No. 1 hive) which had "Isle of Wight" disease worst during the winter, and which I treated with Izal, particulars of which I gave in my letters in BRITISH BEE JOURNAL of August 31st (9316).—FREDK. M. CLARIDGE.

RE "ISLE OF WIGHT" DISEASE.

[9341] Whilst myself not requiring to use any more remedies or suggested remedies for my bees, which seem quite healthy again, I am writing to mention the suggestion of a medical man who told me that aromatic chalk powder would perhaps be more effective than the pea flour. I should like to know what the two drugs the Board of Agriculture send out are, and also the nature of Bacterol. Is it of the same substance as Dioxogen—hydrogen peroxide? REV. H. NEWMAN.

[The composition of the two drugs that are being used by the Board of Agriculture is known only to themselves.

"Bacterol" is a preparation based upon infusions of eucalyptus and Alpine peppermint combined with formaldehyde and

iodine, and prepared and modified by special processes at a high temperature, and it is claimed that in the processes of manufacture the formalin is so modified that its objectionable features are removed and its efficiency trebled.

Dioxogen is peroxide of hydrogen with the addition of a small quantity of an acid to render the oxygen more stable.—EDS.]

ODDS AND ENDS ABOUT BEES: DIOXOGEN, ETC.

[9342] It is long since I had time or opportunity to send you a few notes from this quarter, and possibly might not have done so now but that Isle of Wight disease, after circling all round about me, spreading desolation in its wake, made its advent into my apiary in June. I sent four different samples of bees affected to practical bacteriologists who are working upon the subject, and had the trouble certified as the dreaded scourge, "Isle of Wight" disease. I need not have done so; the symptoms were too apparent, and the results of each day's destruction pointed to an early clean out of my apiary. But (I put a capital B) on the 20th July the letter from the Rev. A. H. Hollis appeared in the columns of the BRITISH BEE JOURNAL. I was quite well aware of the excellent properties of peroxide of hydrogen, but not under the name of Dioxogen.

I at once sent for a pint of the latter, and got a small spray. Not knowing the proportions of the fluid and water used, I made the mixture of equal parts and began with the worst hive. The next morning no dead bees were on the board, and no crawlers were to be seen that day. A few days later I got a little assistance and sprayed six other stocks, with similar results.

I procured, with difficulty, a better spray at a barber's shop, which (spray—not shop) materially lightened the labour and did the work more efficiently. I have sprayed the worst three times. Now I see Mr. C. H. Heap sneering at the contributions of the Rev. A. H. Hollis and advising bee-keepers not to follow his advice.

As to whether the mischief is caused by a bacillus or a protozoon is quite immaterial when the results from the use of Dioxogen are so gratifying. If Mr. Heap is convinced that the disease is caused by a protozoon, skilled bacteriologists inform me that the reason no cure has hitherto been found is because scientists have not been able to settle the point, and that no cultures have been made, or a cure would soon be found.

When I first used Dioxogen the hive contained only two combs of brood cared for—the outside combs were chilled; but 17 days later there were 8 combs of brood in all stages, but mostly sealed; the chilled brood cast out, and a little honey was being stored above. To-night, the 24th day after use, the super is well filled with bees and honey is being stored freely, the day being suitable.

Not one of my affected hives has perished, but all have improved, and show no sign of taking a relapse.

Before using H_2O_2 12V, the garden paths were a mass of crawling, or hopping, or dead bees. Every little stone had its crown covered with inert bees. Every bunch of arabis was the last resting-place of a doomed cluster.

Whatever crawling bees were left after the first treatment had all their bowels loaded with foul-smelling fæces. Later, a few crawlers were only to be seen after 4 o'clock, and were mostly exhausted field bees that failed to reach the alighting board. They were no longer bloated, and when pressed between the fingers yielded only clear liquid, like honey. Some few bees were still affected with paralysis of one wing. None have been seen for about ten days. Dioxogen was the only remedy I used on both affected (12) and unaffected (8) stocks, and solely by spraying. I am not prepared to admit that because my bees have been affected this year that it is reasonable to expect them to be affected next year. I had measles 58 years ago, and medical men pronounced the case hopeless. An amateur suggested some simple remedy, with the result that I have survived till nearly sixty.

Dioxogen is sold in bottles at 1s., 2s., and 3s. each. My outlay has been 8s. 6d., and twenty hives have been saved.

The scientists have had ten years in which to formulate a remedy, and they have been hopelessly out-classed by an amateur's shrewd suggestion based on experience.

During the season ending October, 1915, over 1,000 stocks perished in the West of Scotland, and if scientists had been able to suggest a remedy at all approaching efficiency some of the affiliated bee-keepers would have strained every nerve to save their stocks.

In two neighbouring villages a total of 90 stocks succumbed last year. All I have treated or assisted in treating are to be found foraging up to two miles afield.

I intend spraying twice again before going into winter quarters, and shall assist every bee-keeper within a radius of five miles to do the same.

I have used 1:1, 2:1; 4:1, and 6:1, but cannot say I have noticed any advantage in the stronger mixtures.

I am informed by an analytical chemist

that the V in the chemical symbol for dioxogen $H_2O_2$12V stands for vanadium, a metal used in the toughening of steel. If so, there is virtue in the V.—D. V., Dunaskin.

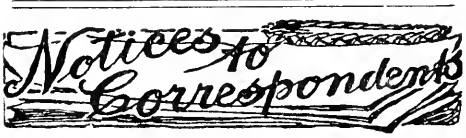
HONEY IMPORTS.

The value of honey imported into the United Kingdom for the month of August, 1916, was £54,740. From a return furnished to the BRITISH BEE JOURNAL by the Statistical Office, H.M. Customs.

HONEY BUTTERSCOTCH.

Here is a recipe for some good old-fashioned butterscotch. You can't get enough of it, and it won't hurt you, for it's nearly all honey.

Boil two cups of honey until it hardens, when a little is dropped into some water. Stir the latter part of the time, taking care not to let it burn. Stir in half a cup of melted butter, add ¾ teaspoonful of salt, and flavour with vanilla. Pour on to a cold greased platter, and, when cool, cut into squares and wrap in oiled paper. Wrapping is quite important, as, unless the candy is kept away from the air, it will gather moisture and become sticky.—From *Gleanings*.



Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. All questions must be accompanied by the sender's name and address, not necessarily for publication, but as a guarantee of good faith. There is no fee for answering questions.

VERACITY (Wexford).—*Packing Sections for Travelling.*—Procure some squares of wood about ¼in. thick, and 4¾in. square. Wrap the sections in paper by half dozens, placing one of the squares of wood at either end to prevent the outside faces of the comb being damaged. Tie them tightly together by a piece of strong string passed round endways. In the bottom of a suitable box—a Tate's cube sugar box is one of the best—put about 4in. of straw, place the packets of sections on this at equal distances from each end of the box, and allow 2in. or 3in. of space between sections and side of box. Fill tightly all round between sections and box with straw. Then place another layer of sections in the same manner, with no straw between the two layers, and so on until the box is full, within 3in. of the top. Fill up this space with straw tightly packed and nail the lid on. Three dozen sections are sufficient to put in one box. (2) Thirty pounds. (3) They are more likely to swarm than natives.

G. SMITH (Yorks.)—*Packing Bees for Travelling.*—The frames *must* be wired to travel safely.

A skep should travel inverted and in a box or crate.

If the railway company accept bees at their risk and charge accordingly, we should say they are liable for any damage caused by their servants. You will have to get damages from the vendor, as in this case it was not the fault of the railway company; the damage was caused by bad packing. Under those circumstances, if the skep contained a fairly strong colony of bees, the combs would have fallen had it not even been moved.

When live bees are sent by rail they should be labelled as such in large bold red letters.

We have an article on the above subject for "Helpful Hints for Novices" now in the press.

A. TOWN (Abingdon).—Sorry we are unable to say.

"ROSE" (Sheerness).—Mr. G. W. Judge, Barrowdene, Shepherd's Lane, Dartford.

Honey Samples.

C. T. B. (Devon).—The honey is a very good heather blend.

"RADNORIAN" (Presteigne).—It is clover honey of excellent quality.

Suspected Disease.

W. HUNT (Christchurch).—We cannot say without more particulars. The bees may be short of stores, or the larvæ may have been chilled.

T. A. KENDALL (Lancs.).—It is "Isle of Wight" disease. The postage was all right, thanks.

ANXIOUS TO LEARN (Stirlingshire).—The dark spots are pollen.

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Two Words One Penny, minimum Sixpence.

Will advertisers please read these Rules carefully in order to save trouble, as they will in future be strictly adhered to.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not permissible at above rate, but will be inserted at 1d. per word as* **"Business"** *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of 3s. per ½in., or 5s. per inch.*

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Advertisements must reach us NOT LATER than FIRST POST on TUESDAY MORNING for insertion in the "Journal" the same week.

Orders for three or more consecutive insertions in "The Bee Journal" entitle advertisers to one insertion in "The Bee-Keepers' Record" free of charge.

PRIVATE ADVERTISEMENTS.

FOR SALE, by W. HERROD-HEMPSALL, Old Bedford-road, Luton, Ariel 3½ h.p. Motor Cycle and Side Car, in perfect condition; any trial or expert examination allowed; spares, belt, in leather case, two tubes, one cover, valve spring, back axle; all wheels fitted with Peter Union bands, back to saddle, horn, speedometer, three acetylene lamps, special luggage carrier on side car to carry two gallon can of petrol and one quart oil can, in addition to luggage, kick start, three speeds. Ridden by above, to be sold on account of medical advice; price £70.

FOR SALE, one or two strong, healthy stocks, on bar frames.—MISS SHAW, Springfield, Feltham, Middlesex. v 27

YOUNG fertile queens, price 5s. each.—PRYOR, Breachwood Green. v 28

WHITE clover honey, 8lb. tins, g.w., carriage paid nearest station, 8s.; in bulk, f.o.r., £5 per cwt.—THE RECTORY APIARY, Eaton Bishop, Hereford. v 29

A ROLL OF HONOUR.

Although bee-keeping is considered a minor pursuit, we venture to say that it has provided more fighting men than the usual average of any industry. To place on record the part the members of our craft have played in the present war we propose to make a "Roll of Honour," and shall be pleased if our readers will forward us the **Names** and **Addresses**, together with the **Regiment** and **Rank**, of any bee-keeper serving his King and Country at home or abroad; also if killed or wounded.

We print a further list of names to those sent in, and shall be pleased to have other names as soon as possible.

J. W. Wilson, 29, Warwick Street, Hull —1st Class Stoker, H.M.S. Wolf. Invalided through shock and nerve trouble.

BRITISH BEE-KEEPERS' ASSOCIATION.

The Council of the British Bee-Keepers' Association are anxious to obtain gifts of honey for the wounded soldiers in the London Hospital, where it is urgently needed both for food and medicinal purposes. They will, therefore, be grateful for gifts of same, no matter how small, from bee-keepers throughout the British Islands. It is unnecessary to explain our obligations to these brave fellows, who have sacrificed health and limbs for the sake of our country. Gifts should be sent addressed to the Secretary, B.B.K.A., 23, Bedford Street, Strand. The donors' names will be published in the "B.B.J." and RECORD.

W. HERROD-HEMPSALL,
Secretary.

HONEY FOR LONDON HOSPITAL.

Amount already received ... 261½ lbs.

FORMALIN AND PHENOL FOR "ISLE OF WIGHT" DISEASE.

No doubt many of our readers will recollect a short paragraph appearing in most of the daily papers in the spring to the effect that Mr. E. Stone, of Tiverton, had found a cure for "Isle of Wight" disease in Formalin and Phenol. We wrote and asked Mr. Stone if he would kindly give us the particulars for publication for the benefit of our readers. In response we have received from him the following full and interesting account of his researches and experiments :—

With regard to the cure for "Isle of Wight" disease as stated in the papers during the spring of this year, I may say that I never claimed to have discovered a cure for this dreaded disease. My bees had suffered from it and I lost a number of stocks last autumn. I treated some stocks in bar-frame hives, with the result that they came through the winter all right, whilst a great many stocks in the district died, as also did the stocks which I did not treat.

The local paper (the *Tiverton Gazette*) printed the facts, but other papers misrepresented what appeared in this paper—hence the extravagant claim which has appeared in papers all over the country.

I should have written to you before, but was assured by bee-keepers and experts that my bees would eventually succumb when the warmer weather arrived. I am glad to say that the prophets, in this case, have proved false. I have had a very fair season, and still no sign of disease.

About the end of September last year my garden was covered with crawling bees—this symptom appeared quite suddenly in one stock, and in a few days every stock had its crawlers. The stock suffering the most I destroyed, burning everything belonging to it. My remaining ten stocks continued to go from bad to worse, and I was advised that I should lose the lot, so had better destroy the bees, take their stores, and give up bee-keeping until the disease had disappeared, but how the disease was going to disappear—without all the bees disappearing too—if everybody took that view I failed to see. With a small knowledge of chemistry, and still smaller knowledge of bacteriology to help me, I tried to keep my bees alive. I commenced feeding with syrup made as follows :—

5 lbs. best cane sugar, } boiled.
2½ pints of water, }

then added 2 teaspoonfuls of sodium chloride (common salt).

2 teaspoonfuls of 40 per cent. acetic acid (vinegar would do).

To each pound of syrup was added a quantity of the following medicating solution :—

1 pint of water.

2 tablespoonfuls of 40 per cent. Formaldehyde.

1 tablespoonful of pure Phenol (carbolic acid).

This treatment did not appear drastic enough, so I took away all the natural stores possible, rubbed the inside of the brood chamber all around with a piece of flannel saturated with the medicating solution, treating the outer sides of the remain-

ing brood frames in the same way; then added, in some cases, foundation, and in others drawn-out comb, and fed rapidly.

I might say that I found it difficult in some cases to get the bees to take the medicated syrup until I fed as follows:—The first lb. of syrup was given unmedicated, to the next lb. I would add 1 teaspoon of the medicating solution, to the third 2 teaspoons, and so on, until I found the bees refusing the syrup. I can lay down no hard-and-fast rule as to the maximum quantity of medicating solution to be used, as I found that some stocks would take much more than others. I also found that they would refuse syrup in the slow feeder, but take the same in the rapid feeder. I always gave the syrup warm, and regularly washed the entrance and flight board with a fairly strong solution of Formaldehyde and Phenol, also well disinfected the quilts with the same. For a time the crawling continued, but gradually stopped.

By Christmas all the bees untreated were dead, leaving a good supply of stores in each hive. The remaining four stocks appeared all right until January, when one stock showed signs of dysentery. I examined the hive, and found a large number of dead bees in it, so I brought it into a warm room, brushed the bees from the combs into a box, cleaned the hive again, took away the soiled combs, and subjected the other combs of stores to fumes of Formaldehyde.

The bees in the box were now roaring through being in a warm room. These were quickly transferred to the hive again, the entrance closed with perforated zinc, and warm medicated syrup given them. After being kept indoors for a couple of days the hive was placed back on its old stand. There were only slight signs of dysentery after this, but the stock had been greatly depleted, so that by April there was only a half-pint of bees left. However, they have worked up to a good strong stock, and given one rack of shallow combs surplus, so one feels amply repaid for the trouble taken.

As to whether the fact that the stocks which were treated survived, whilst the untreated stocks died is a mere coincidence, I leave others to judge.

During this season I have had numerous opportunities of treating diseased stocks in this neighbourhood by the same method, varied with other experiments, which may be of interest and help, so I give the following short summary:—

(1) Stock, badly diseased was sprayed with a weak solution of Iodoform. Stock recovered and did well.

(2) Stock sprayed with Izal recovered, but took disease again in August. Drastically treated hive, combs and bees again with Izal, and fed with syrup. Appears to have recovered again.

(3) Sprayed bees with flowers of sulphur, and gave clean hive, frames of foundation, one jar of syrup. Stock recovered.

(4) Stock badly diseased, and intended to spray with hydrogen peroxide, but having no hydrogen peroxide, made a solution by using sodium peroxide and hydrochloric acid, noticing that this gave a solution of salt and hydrogen peroxide—according to the formula—

$$Na_2O_2 + 2HCl = 2NaCl + H_2O_2$$

(common salt + hydrogen peroxide)—

and that salt is considered good for bees, I sprayed with the double solution. The bees seemed to recover well for a time and then go back again, but on dressing the hive with Formaldehyde and Phenol and spraying with the peroxide solution again, they completely recovered.

(5) Stock suffering with dysentery. I sprayed with solution containing tannic acid, treated hive and frames with Formaldehyde and Phenol—complete recovery.

A number of stocks having various treatments, such as Beta Napthol, Magnesium Sulphate, Quinine, and Odourless Paraffin, did not do well until drastically treated with Formaldehyde and Phenol.

One stock failed to recover under any treatment, but on giving a young queen and one comb of brood, recovered and did well. A bacteriological examination of the original queen showed that parasites were in her system similar to those of the *Nosema apis*.

My inference from various experiments and experiences is that whilst some chemicals do good for a time, it appears essential for successful treatment to have a chemical with strong germicidal properties always present, to prevent the spores of disease germinating into active bacteria or parasites.

ERNEST STONE.

EXPERIENCES WITH "ISLE OF WIGHT" DISEASE.

By J. Price.

In resuming the notes on my experiences on the above during the season of 1916, I should first of all like to thank the Rev. Hollis for his report on the use of Dioxogen in combating this deadly scourge of bee-keeping.

In telling the readers of the BEE JOURNAL so frankly of his discovery he has gained their admiration, and whether later on Dioxogen is superseded by Bacterol or otherwise, it will always be remembered that he was a bee-keeper who tried sensible things in dealing with his bees, and that he at once let the public know the result, not for the sake of publicity, but for the benefit of the bee-keeping fraternity.

My readers will recollect that in my previous articles I advocated only the use of

those things for experimenting that were not objectionable to the bees, and which could be handled by any ordinary bee-keeper. What is the use of any remedy that requires an expert to apply it and which necessitates carrying out very stringent rules to attain success?

Dioxogen and Bacterol appear to me to have just the desirable qualities, and if every bee-keeper will give them a trial at once we shall soon know their true value as remedies for this disease.

As to the former, the Rev. Hollis and others will be interested to hear of the following: On the 7th of August I examined a stock that to all appearance was doomed. From a stock covering ten combs and occupying two supers it was reduced to three seams of bees in brood box; apparently all the older bees had gone, as the ground was covered with their dead bodies.

The owner got a bottle of Dioxogen and gave those left a good spraying, as advocated by the Rev. Hollis, following this by another application a week later. In the meantime a feeding bottle was placed above them, and they were fed slowly with thin syrup medicated with Dioxogen.

On Saturday, September 16th, I again inspected this stock, and was agreeably surprised to find the bees covering eight combs with brood in five. Not a trace of disease could be seen, and the bees were very active, so active the owner told me that at times he had to be careful how he approached them. This bee-keeper now stated that he is so satisfied with this remedy that he is very reluctant to try anything else.

The stimulus that the prospect of curing bees with either Dioxogen or Bacterol (on the latter I hope to communicate later on) has given to the bee-keeping fraternity is clearly emphasised in the following amusing episode which was related to me quite recently.

This friend of mine had formerly lost his bees by disease, and the prospect of again keeping them was so attractive that he made another purchase of a stock, which was duly placed in the garden on the morning of a certain day. So delighted was he during the day that his thoughts were concentrated on his bees.

On returning to rest for the night these happy thoughts took a serious turn in dreamland, for during the night his good wife was aroused from her slumber to hear her husband prowling round the bedroom. "What are you looking for?" she asked. "I am only lifting the lid of this beehive," came the reply. "There isn't a beehive in this room," retorted the wife. "There is; it belongs to Mrs. Brown down the lane, and it's here," answered the sleep-walker.

On hearing this the wife thought that she had better get a light. When she did she was astonished to find her hubby had removed the lid from her hat box and was investigating the contents.

Needless to say what happened when the sleeper aroused from his nightmare. One thing is certain: he has avowed in future never to mention "lid" when speaking of a beehive roof.

(To be continued.)

ONTARIO BEE-KEEPERS' ASSOCIATION.

HONEY A GOOD CROP.

With prices of all other foods soaring, housewives will be pleased to learn that there is plenty of honey and that the prices will not be advanced. The report recently issued by the Ontario Bee-keepers' Association shows that a large crop of light honey has been extracted this season. The quality is unsurpassed, being light in colour, heavy body and a very good flavour. The Association's Honey Crop Committee have advised that last year's prices be not advanced, so that honey will be freely bought in many households.

As it requires no preserving and will keep in first-class condition in any dry, cool place, the 60-lb. can will be a popular size. An average family will conveniently use that quantity throughout the winter. It is to be hoped that the supply will be equal to the demand. Many customers are buying early.

The prices recommended by the Committee are as follows:—No. 1, light extracted, wholesale, 10 cents to 11½ cents per lb.; No. 1, light extracted, retail, 12½ cents to 15 cents per lb.; No. 1 comb, wholesale, $2.00 to $2.75 per doz.; No. 2 comb, wholesale, $1.50 to $2.00 per doz.

These prices are f.o.b. in 60 lb., 10 lb. and 5 lb. tins, the former being net weight with the tin thrown in, the two latter being gross weight.

DARK HONEY CROP REPORT, 1916.

The Crop Report Committee of the Ontario Bee-Keepers' Association met on Friday, September 8th, to consider the crop of dark honey. It was found that 89 members had reported 91,325 lbs. from 5,091 colonies, being an average of 18 lbs. per colony. This is about the same as last year's average, but owing to high prices prevailing in all similar lines, the Committee advises members to ask 8½d. to 9d. per lb. wholesale, depending on the size of the package and the quantity sold in one order. No buckwheat honey should be retailed for less than 10d. per lb.

In issuing this report a year ago, the statement was made that the local demand for white honey was exceedingly good. The

situation this year is, if anything, better than a year ago, and the very large crop of white honey is moving out rapidly. Many of the members have sold out entirely at prices as good as, if not better than, those recommended by the Committee. When it is remembered that nearly a year must go round before another crop is harvested, and weather conditions have not been the best for next year's clover, bee-keepers need have no worry about selling their honey at good prices.

Of course, dealers have been able to secure a certain amount of cheap honey. It is always this way, and while the bee-keepers who sold cheap are the losers, it is good for the honey trade that dealers are able to make an extra good profit on some of the honey they handle. The Secretary frequently has inquiries for names of bee-keepers having honey for sale, and while responsibility is not assumed, he is willing to put dealer and member in communication if so requested by any member.

Signed by the Committee :—
WM. COUSE, W. J. CRAIG,
H. G. SIBBALD, MORLEY PETTIT, Sec.-Treas.

ON BEE-DRIVING.

For the enthusiastic bee-keeper three events of the year hold a charm above all other periods. First comes that burst of genial weather which, soon or late, each spring offers to the awakened bees, fast gathering strength after their long winter's rest, when once again the merry hum of work and play—the young bees are out now—fills the air. Then, later, those days of early June when the main honey-flow begins, and the earth seems verily to distil nectar, and the bees go wild in a riot of work. And, last, those autumn days when the guards watch over the season's store and but a few workers pass the gates to dally with the dwindling fall bloom of clover and charlock—this is the time for bee-driving. And what a fascination there is about the work, both in preparing for and carrying it out! First the journeys awheel into the surrounding countryside to reconnoitre for those last strongholds of an effete system—as many would have us consider it—the skep apiaries of the old-fashioned bee-men! Then, when we have lighted on some such old-world bee-garden as the one so inimitably told of in the "Bee-master of Warrilow," having gained the good will of the owner and his permission to drive his "condemned" stocks comes the question —"when may I take the bees?"

There, in the writer's experience, comes the difficulty. The skeppist has a conviction that stores go on accumulating so long as the sun shines hot and flowers bloom by the wayside, so that, anxious though he may be to get the bees home and settled for winter, it is rarely the bee-driver's good fortune to get to work before September has wellnigh run its course.

The actual work of driving is too familiar to need description here; indeed, it is the one "stunt," as our trans-Atlantic brethren would say, which our bee-tent demonstrator allows himself. Certainly, it "draws" when carried out before the eyes of an average flower-show audience, yet it requires much less skill and care than do many less spectacular manipulations. For all that, it is well for the beginner to practise on an isolated skep in some quiet corner before beginning driving on an extended scale—broken-down combs, spilt honey, and want of method will speedily produce robbing, bad temper, and general uproar in an apiary, the result being that the skeppist decides emphatically to stick to his sulphur-pit, and in future to show the gate to all aspiring bee-drivers! Occasionally in driving one comes across a skep which will not submit to being lifted after the customary few puffs of smoke at the entrance; instead, at each attempt to separate it from its floorboard the inhabitants rush out viciously and make things very unpleasant for the operator. With such a stock it is well to try blowing smoke under the stand as well as into the hive, for it will generally be found in such cases that the combs have been extended downwards below the floorboard, the bees having gained access to the space beneath through some chink or knot-hole. Naturally, these combs are very exposed to the attacks of robbers, and it is the constant struggle with these marauders which accounts for the vindictive temper displayed by the inhabitants of these hives.

Bees in boxes are specially difficult to drive, as the receiving skep cannot be satisfactorily fixed to the box, the difficulty is accentuated where the combs do not fill the latter, as then the bees will often cluster in the unoccupied space and refuse to go up.

In this case, and, indeed, whenever the conditions of weather, etc., are against the bees running freely, it is best to use the old "closed" method of driving, whilst a little honey just smeared in the receiving skep will add to its attractions for the bees below. Bees also prefer ascending into an old well-propolised skep rather than into a new one, but there is some danger in using the former if the bees are to remain confined in it for several hours, the sides being impervious to the necessary ventilation, which passes freely through the walls of a new skep.

Having transported the driven bees home they are, unless it is absolutely impossible, best hived at once, so that the

commotion consequent on their taking possession of their new quarters may have subsided before would-be robbers are on the wing. Indeed, even when returning home after dark, I prefer dumping the bees on to the tops of the frames in the hive they are to occupy, and throwing the quilt loosely over them, rather than leave the operation of hiving for next day.

As to the winter food supply for driven bees, undoubtedly they are best hived on to combs of ready-sealed stores, either brood combs or shallow combs. In the latter case two boxes should be used, the upper filled with stores, the lower with empty combs, this allows the bees to form a proper cluster; of course, both sets of comb should be constructed of worker cells to allow for proper development in spring.

A final word—beware disease! The most healthy-looking skep may have incipient "Isle of Wight" disease, therefore, take no risks, but place your driven stocks as far as possible from your home apiary, and give them at least six months quarantine, otherwise you may bitterly regret having harkened to the lure of bee-driving! RED +.

"ISLE OF WIGHT" DISEASE.

I agree with Mr. Heap in thinking that no remedy has been discovered for "Isle of Wight" disease. I disagree with him on the question of immunity or high resistance powers in some strains of bees.

The cures attributed to Dioxogen and to Bacterol are, some of them, rather dramatic. Apart from that, I believe that this summer has shown a great number of apparent recoveries where no drug has been used. I have used nothing except a very little sulphur. I had one stock moderately strong obviously affected for a year past, and two that dwindled all spring, and in June were only nuclei fit to be re-queened without division. I used up on them twenty of thirty old combs that bees had died upon of "Isle of Wight" disease. By artificial division they grew to eight lots, two of them defunct. The parent gave 15 lbs. surplus, and is rich on ten standard and ten shallow combs. Its offset gave 15 lbs., and is rich on standard combs. The other four are good for the winter on seven or eight combs apiece. The swarm flew away and hung about for a long time, causing a lot of idleness. I took a cast of black bees that at once showed signs of disease and nearly died out before the young bees were out. These show a lot of yellow, as do all my bees now, and there are no signs of "Isle of Wight" disease, though I expect it is latent in all my stocks.

I am very glad that Mr. White will give us a further article on the peculiarities of Italians. I think their failings are born of their virtues. Mr. Heap amuses me by suggesting that the outward difference of colour is all there is to take account of. There is not so much outward difference as that between a Briton and a German, but we seem to be agreed that the inner difference in the latter case is rather great.—G. G. DESMOND, Sheepscombe, Glos.

DENSITY OF QUEENSLAND HONEY.

A Government expert in Australia, referring to density of the honey of Australia, America and Europe, says that, owing to the dry climate, Australian honey is generally more dense than that of other countries. In Europe and America the denser honey is found in capped combs, from which the atmospheric moisture is excluded, but here the experience is the reverse; the capping, instead of preventing the honey from absorbing moisture, preserved the natural moistures of the honey from desiccation, while uncapped honey is often so thick as to be extracted with difficulty. The water content of Queensland honey runs from 17 down to 12 per cent., while in Europe and America it is generally from 25 to 27 per cent. One effect of this is that local honey, when in a damp atmosphere, absorbs moisture, the exposed surface becoming wet and soft. This does not affect the bulk of the contents of the jar or tin, however, as water, being lighter than honey, does not penetrate the mass. On the other hand, when honey is exposed to a dry atmosphere, the water it contains is drawn off by evaporation, even from the centre of the mass, owing to the specific gravity of the honey being greater than that of water. As an article of food the value of the honey is increased by its density.—The London correspondent of the *North Queensland Register*.

CONTINENTAL TRIP.

A HUMAN HIVE.

I hope I shall not be giving away, or saying anything that I ought not, if I attempt to describe how our vast army of, if we consider economies, I am afraid I must say "drones," are provided with the sustenance, in great part, of sinew and muscle, without which, in spite of numbers, we should not be able to go very far.

The hive in this particular case is a large iron building some 200 by 50 feet. We must admit the claim of the occupants to be workers, as they are almost at swarming point, some kneading in large troughs, others cutting and weighing awkward looking lumps of "pollen," which presently emerge from the cells in beautiful golden pellets as true to size and colour as one could meet if made for exhibition purposes, pairs of men carry trays containing con-

siderably more than a hundred of these steaming loaves to be cooled, counted into large bags, and labelled to their destinations, and it is very evident some of these workers have not been used to such heavy and gigantic measures. Some idea of the enormity will be obtained when we consider some 80 to 90 tons of Nature's pollen is used daily to keep this one immense staff going. To this we must add the miles covered by steamship, loaders, and unloaders, vans in a continual stream to the "hive," and this without the energy devoted to production, "how can we keep going?"—A. H. HAMSHAR.

CORRESPONDENCE.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

DISINFECTANTS AND "ISLE OF WIGHT" DISEASE.

[9343] Subscriber's complaint in your issue of September 14 (9322, p. 290) of the Board of Agriculture's refusal to try the effect of Bacterol must be appreciated by all bee-keepers, but their refusal is probably accounted for by their belief that disinfectants are powerless to destroy the protozoa of "Isle of Wight" disease.

If it has been generally proved that disinfectants are useless as a cure their attitude is intelligible, whatever we may think of their disinclination to experiment with a new one.

Supposing it can be demonstrated that disinfectants have no destructive power over these protozoa the sooner we bee-keepers recognise the fact and proceed to other experiments the better for us all. Certainly, up to the present, all disinfectants have proved failures, and the improved appearances of our hives after their use require another explanation.

If some bacteriologist would experiment with the last two (peroxide of hydrogen and Bacterol) on the organisms and spores of this disease, it would help to enlighten us as to the real result we may expect from their use and answer the question by a shorter and more reliable method than the mere appearance produced in a hive as to whether we have found a likely cure or not.—F. W. DUKE, Ongar.

BLIND LEADING THE BLIND.

[9344] In your issue of September 21st Mr. Heap charges me with being "A Champion of the Dioxogen Nonsense." I wrote one short letter only on the subject defending, or rather praising, Mr. Hollis's endeavour to be of service to bee-keepers generally, and condemning Mr. Heap's action in writing so dogmatically on the subject. He could have taken up a firm attitude against Dioxogen without offending anybody, but he prefers to go for all and sundry who even mention the word.

Mr. Heap can understand, he says, how angry his letter made me feel. What a wonderful power of understanding he must have!

He will, of course, have read Mr. Smallwood's letter, and the latter part of Mr. Manley's letter about the "Heap nonsense," and I feel sure he will now apologise for jumping to conclusions, getting angry for nothing, and thinking himself infallible.

By-the-way, more "blind ones" keep cropping up—to wit, Dioxogen blind, Bacterol blind, and the Izal blind. We shall soon all be blind, except Mr. Heap.—W. THORNE.

HYDROGEN PEROXIDE OR DIOXOGEN.

[9345] The following notes may be of use to D. V. (9342, p. 307), and also to other readers of the "B.B.J.":—

Hydrogen peroxide is sold in the form of a solution in water of variable strengths; the strong solutions do not keep well, they decompose, giving off oxygen gas.

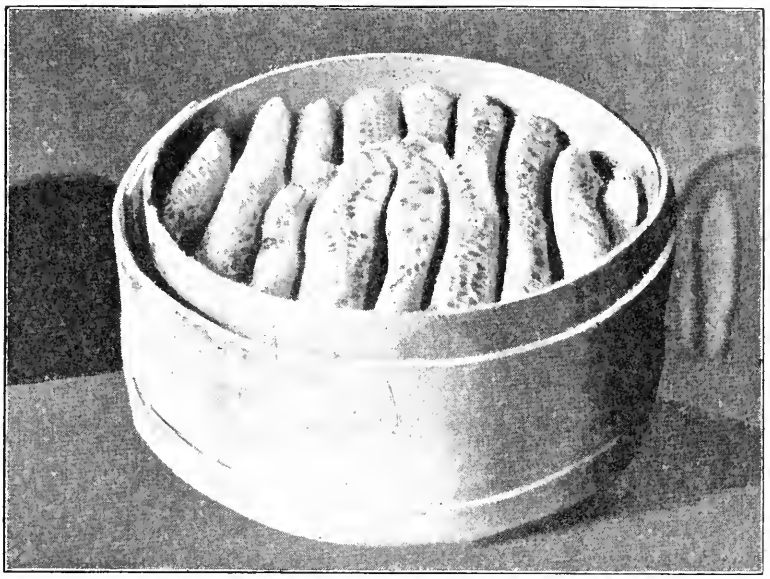
When a solution of hydrogen peroxide acts as a disinfectant or antiseptic agent, this oxygen, which can be given off, is in a specially active form. The amount of it present in a solution is thus a very convenient measure of its value.

A common strength is sold as hydrogen peroxide, 10 volumes, often contracted into 10 vols. or 10 v. This simply means that 1 pint of such a solution can give off 10 pints of active oxygen. It can easily be calculated that this solution contains 3 per cent. pure hydrogen peroxide, or pure H_2O_2. If this solution is mixed with five times its volume of water, this reduces its strength to $\frac{1}{2}$ per cent., which is a convenient strength to use.

Another common strength is 20 vols. This mixed with eleven times its volume of water also gives a $\frac{1}{2}$ per cent. solution. Similarly, a 12 v. strength requires a little more than six times its volume of water.—G. SMITH.

SUPERING STRAW SKEPS.

[9346] The accompanying print shows a super of honey in the comb. The super was made from an ordinary cheese-box, cut in halves, and the lower half pushed inside the upper half after removing the nails holding the lower half together. This makes the super much warmer, owing to the walls being double thickness. If desired, the space between the two halves may be stuffed with some non-conducting and absorbent material, to retain the heat and extract the moisture. The super shown in the print contained 25 lbs. of honey and was stored in eight weeks by a second swarm of Dutch bees. We have had much "Isle of Wight" disease in this district, but so far the Dutch bees have escaped.—A. E. ALLEN.



SUPER FROM A STRAW SKEP.

1916 EXPERIENCES.

[9347] May I give you an account of my experience with bees during this year? In May I was asked to examine three hives which a gentleman had brought from Scotland some time before, and doing so, found two so depleted by foul brood that I advised total destruction, and I was allowed to destroy the bees, and then to burn the hives with all their contents. The other stock had plenty of bees, but, like the others, the combs had broken down, as the joints of the frames had not been nailed. The frames were a mixture, too, some broad-shouldered, some strait bars had metal ends, some not, some were very thick, some very thin. Section racks (home made) to hold 21 sections were on each hive; some sections had been removed, the spaces being filled with a piece of newspaper or a dirty rag. The dividers were pieces of glass 13 × 3½ in.

I had a nice job with this, as bees had joined the combs in twos and threes; but I got them out, and nailed the joints of some frames. Other combs I tied in new frames with tape, and destroyed two, replacing with new frames and foundation. This stock had foul brood in a few cells, but a regular use of Apicure gave me the upper hand in time, and it is now a splendid stock, and has done well.

With my own bees, I began the season with four stocks. They were doing well by the middle of April, and I had my first swarm on May 5, which I put into my only spare hive.

On May 24 I sold two stocks, but the buyer came without any boxes to take them away in, and asked to be allowed to take the hives as they stood. I demurred, saying there was a rack of sections on each, of which half were good combs of the previous season, and half full of honey. In the end I allowed him to do as he wished, on his promising to return all but the bees in a few days. I received the empty hives six weeks later, and by that time, as I was unable to provide proper accommodation, the bees swarmed again and again, so that my honey crop is very little, though I sold a few more bees. I may say that I detected

Isle of Wight disease in one lot the very day your first advertisement of Bacterol appeared, so I got some and sprayed bees with it, according to instructions. In three days all crawlers had disappeared, and there is no sign of anything wrong up to the present, but I will wait till the spring before I say it is a cure. I am going to pack for winter seven stocks, all, I hope, good enough to pull through.—BACILLUS.

THE BLIND. (Page 260.)

[9348] I think Mr. Heap rather too harsh in his condemnation of, to my mind, an honest attempt to benefit by practical experience what science has as yet been unable to accomplish, as such, in curing the "dire disease," and as to the particular stage any micro organism has been traced, and named, I don't see that we benefit at all by his corrections.

As to the mucous coating of the spiracles referred to by Rev. Hollis, I think it a very logical reasoning myself, and as Mr. Heap mentions humanity, I will ask him if stomach troubles, or a severe chill, does not affect our respiratory organs in this way. However, I leave that for imagination. He fails to note that this remedy is also applicable for digestive purposes, therefore it is quite reasonable to think that it would "percolate" into the cells of the stomach and so nourish and strengthen the system, and thus cajole nature to reassert herself and benefit the unhappy insects. When judging by results, we might conclude whether we make one more effort or must give up hope, and bee-keeping, or not.

I am sure the letters of thanks will do something to soften the cold douche to a "Novice," who has already earned thanks for advice, given in a generous, open-hearted manner, which anyone who really cared for their bees could at least try, I hope, if only for one season. This pays for doing. More successes will be published to prove that this disease is not the deadly bugbear we must as yet admit it to be.

A. H. A.

Notices to Correspondents

H. A. HOPKINS (Norwich).—*Leaving Queen Excluder on for the Winter.*—It should be removed so that a couple of thin laths may be placed across the frames under the quilts to provide a winter passage, also if left on the bees will fill the openings with wax or propolis.

SGT. W. COULSON (Alexandria).—To answer some of your queries would take up rather too much time and space. If you have not a good handbook get the British Bee-keepers' Guide Book, in which you will find most of the subjects treated. (1) A good tempered strain of natives. (2) Buy swarms or stocks from a healthy apiary. (3) Depends on what experience you have had; three would probably be sufficient. (4) Some method of artificial swarming. (5) The W.B.C. hive is the best. If that is too expensive a good cottager's hive. (6) Hives, bees, frames, foundation, queen excluders, sections, veil, smoker, feeders, wax extractor, bee escapes, and if you work for extracted honey shallow frames; a honey extractor, uncapping knives, and tray. Some of these articles you could make yourself or improvise. (7) This would depend on the type of hive. Three hives, fitted complete and stocked with bees, would cost from 40s. to 50s., according to the type of hive used. You would also need a wax extractor, 12s. 6d.; and if you worked for extracted honey a honey extractor, 21s. to 45s.; a couple of uncapping knives from 2s. 6d. each. (8) Sections usually make the best price, but are more difficult to produce.

X. Y. Z. (Winchester).—(1) No. (2) We are afraid we cannot, as conditions vary so much that the method employed has to be adapted to each particular case.

Honey Samples.

A. D. ALLEN.—We have received your sample of honey, but nothing to say what you wish to know.

Suspected Disease.

HUGHES (Ilford).—They are mostly drones. We do not find any disease. Possibly the colony is queenless and the others are robbing it.

A. GRAHAME (Annan).—The bees are suffering from "Isle of Wight" disease. If you wish to treat them use Bacterol or Izal.

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Two Words One Penny, minimum Sixpence.

Will advertisers please read these Rules carefully in order to save trouble, as they will in future be strictly adhered to.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not permissible at above rate, but will be inserted at* 1d. *per word as* **"Business"** *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of* 3s. *per* ¼*in., or* 5s. *per inch.*

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FOR SALE, by W. HERROD-HEMPSALL, Old Bedford-road, Luton, Ariel 3½ h.p. Motor Cycle and Side Car, in perfect condition; any trial or expert examination allowed; spares, belt, in leather case, two tubes, one cover, valve spring, back axle; all wheels fitted with Peter Union bands, back to saddle, horn, speedometer, three acetylene lamps, special luggage carrier on side car to carry two gallon can of petrol and one quart oil can, in addition to luggage. kick start, three speeds. Ridden by above, to be sold on account of medical advice; price £70.

YOUNG fertile queens, price 5s. each.—PRYOR, Breachwood Green. v 28

WHITE clover honey, 8lb. tins, g.w., carriage paid nearest station, 8s.; in bulk, f.o.r., £5 per cwt.—THE RECTORY APIARY, Eaton Bishop, Hereford. v 29

TWENTY new lever top tins, 7lb., 10s. lot; ten strong single walled zinc roof hives, 5s. each; Porter escapes, slightly soiled, 1s. each; feeding bottles and stages, 1s. each.—X. Y. Z., "BEE JOURNAL" Office, 23, Bedford-street, W.C.

2 COLONIES of Italians, on 8 combs, 24s. each; geared extractor, good as new, 25s.; 24 copies of Gleanings in Bee Culture, 4s.; 12 copies American Bee Journal, 2s.—BOWEN, Coronation-road, Cheltenham.

BRITISH BEE-KEEPERS' ASSOCIATION.

The Council of the British Bee-Keepers' Association are anxious to obtain gifts of honey for the wounded soldiers in the London Hospital, where it is urgently needed both for food and medicinal purposes. They will, therefore, be grateful for gifts of same, no matter how small, from bee-keepers throughout the British Islands. It is unneeessary to explain our obligations to these brave fellows, who have sacrificed health and limbs for the sake of our country. Gifts should be sent addressed to the Secretary, B.B.K.A., 23, Bedford Street, Strand. The donors' names will be published in the "B.B.J." and RECORD.

W. HERROD-HEMPSALL,
Secretary.

HONEY FOR LONDON HOSPITAL.

Amount already received ... 261½ lbs.

BEEKEEPERS AT THE FRONT.

Numbers of our readers and contributors are now, or have been, at the Front in the thick of the recent fighting. The following extract from a letter sent by Sergt. E. Purvis, who has been serving in the Oxford and Bucks Light Infantry, will give some idea of the numerous escapes and exciting experiences some of our brother beekeepers are going through. The letter is dated from a hospital at Leicester :—

"Just a line to let you know I am back in England—wounded from the 'push.' I am glad to say I am getting on wonderfully well. I had several narrow escapes before I 'clicked.' In the bombardment preceding the attack I got buried three times. The officer on my left, and a pioneer on my right hand side 'stopped' pieces of shrapnel, which burst overhead. I was sitting between them and was overlooked! Then we went over the top, and, by Jove, it was warm! I got within about 20 yards of our objective, and then a machine gun got on to me and ripped my trousers—both legs—to rags on each side of the knee, yet never hit the flesh. I flopped down and lay for a few seconds until the machine gun traversed away a bit, and then I got up again and ran on. About 12 or 15 yards from the trench we were after a sniper from trees behind the German third line got me through the right hand. The bullet went in at the second joint of the first finger, and went right through the hand from side to side, through all fingers in turn, ultimately emerging just below the knuckle of the little finger. Yet as far as we can tell at present, there is no vital damage, though several fingers were, of course, badly splintered by the bullet en route. I was operated on in France, once at the clearing station and once at Boulogne, and expect to have my middle finger (the only one now painful) opened and splinters removed therefrom in a day or so. I am glad to say I can now write again with my right hand—that is, thumb and bandages—but you must please excuse pencilled scrawl, because I am unable to handle a pen yet."

We have also received a letter from our esteemed contributor, Mr. D. M. Macdonald, in which, referring to his soldier sons, he says :—

"I regret to say all three have had a run of bad luck recently. The one in 'Gordons' was gassed the last day of June. He got over it fairly well, but got three months in this country. He leaves again for the Front this week.

"My youngest, Royal Warwicks, has been posted as 'Missing' since July 19. We are keeping up our hopes still, but his brothers, knowing the nature of the warfare near Loos, fear the worst.

"My eldest has been in hospital in France and London all September with trench fever. He is now convalescent and came to his home, Grantown-on-Spey, on Saturday for a few weeks to recuperate. He is now Lieut.-Colonel of the 6th Seaforths. He climbed the ladder rapidly—Captain of his own company, Captain on General's Staff, Captain of a double company, Adjutant, Junior Major, Senior Major, and now in command of the battalion—all since August, 1914."

ANCIENT BEE LITERATURE.

IX.—BEES IN ITALY.

Italy cannot boast of writers of such antiquity as Homer, Hesiod, and Aristotle in Greece, but we have Varro, Virgil, Columella, and Martial flourishing before the Christian era. Of practical apiculturists of the older times, we hear of Aristomachus, who devoted almost all his energy for nearly sixty years to the contemplation and study of bees; and Philiscus, who spent the greater part of his long life in the woods investigating at first hand their habits, without interruption. Of the later period we read of Hyginus, spoken of as Columella's instructor, who was considered one of the most learned and successful bee masters of his time. The accumulation of ancient wisdom, lore,

and practical facts and information are unfortunately lost to us, unless they are embraced in the writings of Columella.

Varro, over 100 B.C., called bees the "Birds of the Muses." His contemporaries, who practised the art of apiculture, were very humane beekeepers, as we are led to believe that they took their share of the honey harvest without barbarously destroying the bees. He tells us of the uses to which they put wax. In those times they had no pens, ink, or writing paper. The surface of thin tablets was coated with a thin veneer of wax, and on this they wrote with a style. When the writing had served its purpose, they erased it by heating the wax, and smoothing the surface, when it became ready for a new impression.

Columella, about 60 B.C., after Virgil, is the one ancient beekeeper most honoured by the writer of these random notes—as a practical beekeeper he stands first. Just listen to the two following ideas. "The bee's temper is mitigated and softened by the continual intervention of those who care for them; they grow tame when often handled." In the time of Columella the destruction of bees for their honey did not exist; the beekeeper took his share of the surplus by cutting out a fair proportion, leaving a living wage to the bees. Hygenius, his instructor, taught him that, and also to place his apiary near the house, where the master's eye would be ever on the busy labourers. For nearly a thousand years Columella has been more frequently quoted in every new book than any other author, and his name and fame has securely stood very high for all that time. What more can be said? His work, "De Re Rustica, or the Book of the Farm," speaks for him! Many modern writers are mere mushrooms compared with a fame so long-standing.

Pliny, the elder, born 23 A.D., in his "Historia Naturalis" supplies information of an immense number of subjects, amongst them matters apiarian. Perhaps on this subject he was a simple compiler, but, all the same, he tells us much of an interesting nature about bees, their structure, their habits, their government. Their king, he says, was much honoured; he lived in a palatial abode, spacious and grand, and he had a great influence on the prosperity and welfare of the community. When their leader is withheld from them the swarm can always be detained. By the cutting off of a wing this can be accomplished. The king has no sting, his subjects doing all the fighting for him. The drone is a thief, an imperfect bee, a burden to the workers. They are the life of the hive. Regarding wax, he tells us, "Bees get wax from almost all plants, carrying it home on their thighs." He tells us of writing tablets made of this substance. Punic wax is best for medical purposes. They took "casts" of wax, moulding the face of the dead in this substance. Propolis, he advises us, "disperses tumours and cures ulcers." Mead is highly commended. Oxymel was made from vinegar and honey. Hydromel is an extremely invigorating drink for invalids. His Mulsum is a honey wine, indulgence in which tends to old age. Honey he also recommends for the same purpose, telling us that the people of Corsica who eat much of it are long-lived. The honey of Attica is the best in the world. The worst seemingly is that gathered near Trebizond. Some kinds are "maddening." Some honey is "engendered from the stars." Bees are great fighters. He can't admit that a sting cure exists. He would apparently agree with Cicero, who considered a man effeminate who could not endure a sting without crying out. He tells us of horses killed by bees, and gives several instances of their use in battle to discomfort the enemy. They had numerous diseases even in these early times. Some hives in use then were "transparent"—a species of observatory hives. They transported their hives along the river so to take advantage of successive honey flows.

Horace, Martial, and Ovid, among the Roman poets, made numerous references to bees, honey, and wax. The first-named tells us of the Fates,

"Who, whilst they search out dooms,
They sit apart and feed on honeycombs."

And he sings of the flowery glades of his native land where the labours of the bee yield Hyblian golden stores. Ovid tells us of "Honey from green hollyokes distilled," of bees that wander on Attic Hybla. "Flowery Hybla" is variegated with many a colour, and Sicilian bees are laying waste the fleeting gifts of spring." He judges honey—

"I think it Corsick honey, and the bee,
From the cold hemlock flowers gathered thee."

Honey from the two Hyblas were very different in quality. "You expect Hyblian or Hymetian honey, yet offer the bee nothing but Corsic thyme."

As we have seen, Ovid ascribes the first domestication of bees to Bacchus. He tells us of a use of wax. "And with the reed well waxed they played and sang."

Seneca in his wisdom considered bees to be "The angriest and fellest creatures." He points to a moral from their fate. "Would a man have wrath like a worker bee, broken with his own weapon, and have

no more means of hurt? for bees if they leave their sting in the wound die. The king hath no sting, his subjects fight for him."

Bees of old were believed to be bringers of good luck, but others look on them as augurs of ill. Livy tells of a swarm of bees settling in a tree near a general's tent, thus presaging his defeat. Pliny records a case where a swarm pitched near another camp, and presaged victory, and not defeat. When they came near infants in the cradle it was considered that they brought the gift of eloquence, song, or poetry. This belief was almost universal.

Honey was much used in these olden times. One poet tells us of "fresh honey being taken from the hives of the host" to treat his guest. Martial sings, "The country man can draw forth the yellow honey from the red cask." Tibullus says, "The farmer's daughter brought the luscious offering of a honey-comb." Cicero lays it down as an axiom that "the production of honey is an essential of good farming." Horace apparently was not a beekeeper, for he laments, "For me Calabrian bees bring not honey." Honey, says Solomon, brought strength. The ancients believed partaking of it secured old age—"Oil without; honey within." It brought eloquence to Plato, says Pliny. To Pindar it brought the poetic gift; also to Homer. In the form of honey-mead it aided the hardy Norseman to attain victory. Mahomet considered it "more healthgiving than the drugs of the doctor." It is used extensively in some countries as an essential in the marriage ceremony, at baptisms, and at funerals. Lastly, it was the "food of the gods."

M.

A SYSTEM OF SWARM CONTROL THAT SHOULD INCREASE OUR HONEY PRODUCTION.

We have been trying experiments this season with a modified "Demaree plan" of swarm control, which has given such good results, that I feel sure it will be the means of increasing our honey production in the future. Our honey flows being usually of short duration, this year only lasting about nine days, the whole or partial loss of the crop in the past has generally been attributable to swarming troubles. This fresh method of swarm control has not only been tested in one locality but in several and has given, so far, satisfactory results in all. Swarming has been kept in check and the honey yield in some cases has been more than double that of hives treated in other ways. The directions for carrying out the "Demaree plan," as it was usually practised, are as follows:—Just before the colony is ready to swarm put all the brood, except one frame, in a second storey over a queen excluder, leaving the queen below, with the one frame of brood, and preferably empty combs, failing which frames with full sheets of foundation. Cut out all queen cells. The brood frames above, as soon as the brood hatches out, will be used by the bees for storing honey. It was found that by adhering to the "plan" strictly, as outlined, that disturbance and trouble was frequently caused by the drones in their efforts to get out through the queen excluder, and if there were many in the hive they would sometimes nearly choke it up. In some cases, the brood being so close to the queen excluder, queen cells would be started above and eggs taken up by the bees from below. The bees also were obliged to store the incoming honey in the bottom chamber until sufficient brood had hatched above to give the necessary room there. The following alterations in the "plan" were, therefore, decided on and put into practice, and have been found satisfactory. In the spring, as soon as the bees are strong enough to cover the frames in the brood chamber, another body containing empty combs is placed above. When the bees have increased in number so as to fill this, or should they show any signs of swarming in the meantime, the queen is found and transferred with one frame of brood to the lower body, which is then filled up with empty combs and a queen excluder placed above. Next will come a second body, containing empty combs, to receive the incoming honey, shallow frames being preferable. Above the latter second storey either wire cloth or a second queen excluder is placed and the remainder of the brood is then put in a third storey. Between the second and third storeys, that is above the wire cloth or second queen excluder, a small entrance is provided, through which the old bees will return to the main entrance below and the drones can escape. All queen cells are destroyed. Should there be none at the time the bees will immediately build them in the third storey, where they must be searched for and cut out up to about the tenth day when the brood will be too old for any more to be built. The wire cloth, or second queen excluder, can then be removed, leaving the upper entrance intact until the end of the season, if preferred. If increase is desired a queen cell can be allowed to remain and hatch out in the top storey, as the young queen can fly out at the upper entrance and get mated. When she is laying she can be used to supersede the old queen below, or can be permitted to remain in the top storey until the end of the season, when

it can be lifted off and placed on a new stand so as to form an additional colony. In this event, however, the honey crop will be lessened, as much of it will have been used up in maintaining a second brood nest.—W. J. SHEPPARD, Nelson, B.C.

CORRESPONDENCE.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

"ISLE OF WIGHT" DISEASE, REMEDIES AND IMMUNITY.

[9349] The life military, even when not specially strenuous, is so unremitting in its demands that it is almost hopeless to keep in touch with ordinary affairs, and I am obliged to confess myself very much behind the times in bee matters.

I have just been home for a few days and took advantage of a small breathing space in the whirl of home demands to read up the back numbers of the JOURNAL which I had missed.

Naturally enough, I found the new remedies for Isle of Wight disease of prime interest, and I must congratulate the Rev. Hollis on being the first to put forward a cure which acts at once on the obviously diseased bees. This is a distinct and—although previous experience makes me chary of being too sanguine about a new remedy—a promising feature of the cure.

As to Mr. Heap, I think your correspondents have dealt too leniently with him. My own feeling is that constant disappointment must have thrown him a little off his mental balance. Destructive criticism of any kind is not of much value, but when the so obviously well-intentioned efforts of novices—however feeble—and the untiring patience of the more experienced, are treated with such brutal and ill-mannered scorn as Mr. Heap invariably deals out, we can only say we have no use for it or its author, and would welcome from him a prolonged silence—if he has nothing of a constructive kind to offer us.

Most of your readers will remember how my own modest contributions on the subject of immunity were pooh-poohed by this same expert. No evidence appears sufficient to satisfy him. Always he prophesies that, sooner or later, the fabric will collapse—however strong and stable it may be. Therefore, I do not record the present condition of my own apiary with any notion of converting him, but for the encouragement of such more normal folk as are willing to believe that there is some satisfaction in having bees which will live in spite of the disease, even if there is no guarantee that they will continue to do so.

In brief, the one stock of Dutch bees which I procured in the spring of 1914 and assiduously fed with infected food has now increased to eleven by semi-natural means, and has given a first-rate return in honey this season. Had I been at home during the flow the returns would have been better. One May swarm had filled its ten brood combs, two racks of sections, and had then made a thick comb all down one side between the cases—a comb of the purest clover honey I have ever seen, and in all upwards of twenty pounds in weight.

I must have missed the most rich fortnight of honey flow that ever was, for even small nuclei stored astounding quantities.

May we have just such another next year, and, above all, may we one and all be at home to take advantage of and rejoice in the midst of it.—HERBERT MACE, Lance-Corpl., 14th Queen's.

DO BEES RECOVER FROM "ISLE OF WIGHT" DISEASE?

[9350] In your letter from Mr. Heap (9329) he states that he has never known anyone save a stock once infected with "Isle of Wight" disease. I really cannot let this pass. Two samples of dead bees sent you last autumn you certified as having suffered from "Isle of Wight" disease. I am the merest tyro at bee-keeping, and have very little time to spare for them, but I persevered with spraying the combs, entrances, and round the hives with Izal. I packed them for the winter, quite expecting them to succumb, but on opening them this spring they were quite lively, and have built up a strong colony. They swarmed August 1, but as the old queen apparently got lost or killed, after about three weeks I returned the swarm to the old hive, and I now have a strong stock, and have extracted about 20 lbs.

honey. Either your diagnosis was wrong, or else Mr. Heap does not know what he is talking about.—S. H. Davis.

A GOOD SEASON, 1916.

[9351] As a member of a County Association, and a reader of your paper, the Bee Journal, for four years, I would like to let your readers know what a good season we have had in Leicestershire. This autumn I have packed up for winter three stocks on frames and one skep. From these I have taken 350 lbs. of honey. I have had eight swarms, five of which I sold. I took over 80 lbs. from a swarm. My bees are *Blacks*, and in our county I don't think they can be beaten. I might say that one stock started with "Isle of Wight" disease, and I promptly destroyed (burned) it, and fed the others with syrup medicated with Bacterol, as prevention is better than cure. Since then I have seen no trace of disease.—J. A. C. K.

QUEEN ON ALIGHTING BOARD.

[9352] Last week a friend called my attention, saying that he saw the queen on the alighting board. After waiting a few seconds she came back. We both have seen her. Is it not a very uncommon fact? The bees were very busy killing the drones. It is a first swarm (early in July), so the queen is an old queen.—Cymro o Leyn.

[We have heard of queens emerging from the hives occasionally, apart from the mating trip, and when accompanying a swarm, but the occurrence is very uncommon—or very seldom seen. The day after receiving your letter another bee-keeper called at our office and related a similar experience. Being afraid she might fly and be lost he to use his own expression, "headed her back" into the hive.—Eds.]

PROLIFIC BEES AND A SIMPLE METHOD OF MANAGING THEM.

[9353] May I suggest to those who are troubled with overmuch swarming that by a comparatively simple management the very prolific bees, such as White-Star Italians, Cyprians and Carniolans, can be controlled.

An ordinary stock of these bees, if left to itself, will swarm and re-swarm, so often sometimes that it will increase to twelve colonies in one summer, and make little honey. I suggest the following remedy:—

Suppose you have a stock, towards the end of April, which is "thinking of swarming" (according to the usual signs). Take a fresh hive (B), place it near the original (A). Go through the combs in A, taking out all combs with queen cells, and placing them, with the bees on them and no more, in hive B. See that you have the queen on a comb without a queen cell, and place it, with one other without a queen cell, in the middle of the brood body of hive A. Fill up this brood body with empty frames and put on queen-excluder. Above the excluder of hive A put all the remaining frames. Remove hive B to a new spot. Now you will get the following results:—Hive A contains the old queen, with abundant room to lay in, a great force of flying bees, with no queen cells to worry the old queen, and considerable brood hatching out above the excluder in combs where (because the queen cannot get there) the bees will store early honey.

Hive B contains, perhaps, three or four combs of brood and bees, filled up with empty frames, also perhaps six to a dozen queen cells. There are enough bees to take care of the brood and hatching queens, but, because their number is not great, the bees will, most likely, not come out with the first-hatched young queen when she flies for mating. In a full hive these prolific bees generally accompany the queen.

In due course a young queen will be fertilised, superfluous queen cells will be destroyed, and in about two months hive B will be a strong stock headed by a young queen.

Now probably, if you carried out this operation in April or May, you would have, early in July, to take another hive (C), and again, as before, to transfer queen-cell combs into it from hive A. But by these two operations, at the times when hive A reached swarming-point, you would stop swarming. All through the summer you would keep hive A hard at work, gathering honey and very strong; by September you would have two beautiful stocks in hand in hive B and hive C.

If you wish to replace the old queen of hive A, you can then unite hives A and B under the young queen of B. Your result for the year is then likely to be much honey, a parent hive of double strength under a young queen, and the excellent stock in hive C to increase your apiary or to sell.—G. D. C., Lower Beeding.

[It is not quite clear what our correspondent means by giving "empty frames," but we take it they would be frames fitted with foundation.—Eds.]

HONEY IMPORTS.

[9354] Questions apicultural appear so often to give rise to such acrimonious discussion in the columns of the "B.B.J." that one hesitates to attempt criticism of a correspondent's views. At the same time the matter of honey imports bears so directly on the prosperity of our craft that it were well to probe it as deeply as

may be, and to find out, if we can, how far the prevalent idea, that honey from abroad tends to damage the market for home supplies, is justifiable.

Your correspondent, Mr. Colebrook, has lately drawn attention to the greatly increased value of these imports, which he roundly condemns, appealing to the home producer to meet the whole market demand; incidentally, he stigmatises all colonial and foreign honeys as being of very inferior quality, which appears to me unjust: but, putting that point aside, the main questions at issue are:—(a) How can the market demand be met by the home apiarist; and (b) will it pay him to meet it? Regarding (a), he may say at once that in the present disease-infested state of our apiaries it is temporarily impossible to supply the whole demand; but, granted a return to healthy conditions, would it be economically possible for British apiaries to monopolise their own market? First, we must needs inquire to whom and at what prices is the present overseas supply sold? The answer, I believe, is that the purchasers fall roughly into three classes: (1) Manufacturing chemists; (2) confectioners; (3) grocers. As to the wholesale prices at which they buy, whilst I have no entry to trade secrets, an incident which happened prior to the war throws some light on this question. Wishing to extend my local custom I one day sounded our grocer on the subject of selling honey. He held up a clear-looking sample in a pound glass jar. "Sevenpence," he said. "Colonial, of course," I replied; "well, now, I want to cut this stuff out. I'll sell you a decent sample of my own production at a cut price if I can. What's the figure you buy at?" "I get this at fourpence halfpenny a lb.," he said, "and bottle it myself." Of course, we did no trade, as I could place all my honey at 6d. a lb. or more elsewhere.

So it comes to this. To monopolise the market we must either get a protective tariff imposed against colonial honey of something like 30 per cent. ad val., or we must be ready to undersell the overseas supply in the open market. The first method is, of course, impracticable, more than ever so now, after our colonies have proved their unity in the Empire in the way they have. The second method I leave to Mr. Colebrook and those who think with him, that the importations hurt us. Personally, I believe we are a good deal indebted to the overseas producers for keeping the public taste alive to the desirability of honey as an article of diet and medicine, during these days when our home supply is, unfortunately, quite inadequate to satisfy the country's needs in this direction.—H. E. Scrope Viner.

QUERIES AND REPLIES.

Queries reaching this office not later than FIRST POST on MONDAY MORNING will, if possible, be answered in the "Journal" the following Thursday. Those arriving later will be held over until the following week. Only SPECIALLY URGENT queries will be replied to by post if a STAMPED addressed envelope is enclosed. All queries must be accompanied by the name and address of the sender, not necessarily for publication, but as a guarantee of good faith. Correspondents are requested to write on one side of the paper only.

LITERATURE ON BEE DISEASES.

[9053] Will you kindly inform me of any publications dealing with micro-organisms of the apiary? I mean not only foul brood bacteria, but the general fungi, bacteria, and protozoon found in the hive, and body of the bee. Will you also give me some information regarding works on *Bacillus larvæ* and *Bacillus pluton* (the two kinds of foul brood)? I presume that Cheshire did not work with *B. larvæ* but with *B. alvei*.

I am sorry to put you to so much trouble, but I have observed that your Journal (of which I have been a reader for a good many years) is always ready to oblige its correspondents.

Arthur Davey.
Ontario.

[Reply.—One of the best publications dealing with diseases of bees is that by Dr. E. Zander. It is in two parts, and deals with foul brood in all its phases, including sour brood and the diseases of adult bees, and treats fully of *Nosema apis*, as well as paralysis and kindred diseases. There are also the works of Dr. Maassen, published in various numbers of "Mitteilungen aus der Kaiserlichen Biologischen Anstalt." They also deal with the various diseases of bees and their causes. However, none of these works can be obtained just now, but possibly they might be found in the library of the Ontario Department of Agriculture.

"Faulbrut und Sauerbrut der Bienen," by Dr. R. Burri, is published by H. R. Sauerländer and Co., Aarau, Switzerland, and contains much information respecting foul brood and sour brood.

There are several pamphlets dealing with bee diseases published by the United States Department of Agriculture, Washington, D.C. The following are by Dr. G. F. White:—

"The Bacteria of the Apiary," 1906; "The Relation of the Etiology (cause) of

Bee Diseases to the Treatment," 1908; "The Cause of European Foul Brood," 1912 (this treats of *Bacillus pluton*); "Sacbrood, a Disease of Bees," 1913; "Destruction of Germs of Infectious Bee Diseases by Heating," 1914; "Also Historical Notes on the Causes of Bee Diseases," by E. F. Phillips and G. F. White, 1912.

You are correct in your surmise that Cheshire worked with *Bacillus alvei*.

The most important recent English work is the "Report on the Isle of Wight Bee Disease (Microsporidiosis)," with the further report published in May and July, 1913. The two are published by the Board of Agriculture and Fisheries, London, and can be had for 1s. 4d. for the two.

WEATHER REPORT.

WESTBOURNE,

September, 1916.

Rainfall, 2.47 in.	Minimum temperature, 36 on 15th.
Above average, .25 in.	Minimum on grass, 28 on 15th.
Heaviest fall, .89 on 25th.	Frosty nights, 0.
Rain fell on 12 days.	Mean maximum 62.9.
Sunshine, 147.7 hours.	Mean minimum, 50.0.
Below average, 29 hours.	Mean temperature, 56.4.
Brightest day, 9th and 14th, 10 hours.	Above average, .5.
Sunless days, 3.	Maximum barometer, 30.354 on 7th.
Maximum temperature, 70 on 28th.	Minimum barometer, 29.429 on 19th.

L. B. BIRKETT.

Notices to Correspondents

G. HANDLEY (Birmingham).—*Prevention of Disease.*—It is advisable to always keep some disinfectant in the hive. When packing down for winter put some Naphthaline and Apicure on the floorboards.

HIVES (Sheffield).—*Outlay Necessary to Commence Bee-keeping.*—(1) In our reply to Sgt. Coulson last week the word "each" should have been inserted after "50s." You can procure a beginner's outfit, consisting of a cottage hive, with ten frames, wired, and fitted with full sheets of foundation, one section rack, and twenty-one sections fitted with full sheets of foundation, smoker, veil, feeder, queen excluder, and book of instructions for 27s. 6d. Two section racks are necessary and the extra one will cost 2s. 6d. empty, or with sections and foundation 3s. 9d. If you have a W. B. C. hive the cost will be 34s., extra section rack as above, also extra 6in. lift 2s. 6d. It is advisable to get a super clearer, one would answer for several hives, and you would, of course, need only one veil, smoker, and instruction book, so the cost of further hives will not be quite as much as given above. (2 and 3) The W. B. C. hive, from 30s. (4) Not quite indefinitely. We have heard of ten supers on one hive, and we had several with five and six on this year.

"NOVO" (Lincs.).—(1) You did quite right. (2) It was probably owing to the feeding.

R. DAVIES (Corris).—(1) Both are good honey plants, especially sycamore. (2) You will find this subject treated in the "A B C and X Y Z of Bee-keeping." (3) If tits are very troublesome herring netting may be fixed on the front of the hives, or fill coconut shells with fat and hang in various places. This will provide the tits with animal food, which will take the place of insects.

M. H. (Ringwood).—(1) It depends on the size and price, particulars of which you do not give, but if in good condition and for two combs with reversible cages, and the price is reasonable we should advise you to buy the "Cowan." (2) Mr. F. D. Hills, Ivanhoe, Park Close-road, Alton. (3) Your best plan will be to run a little out and send it in a small bottle, well packed.

Honey Samples.

M. W. BALES (Hants.).—Clover with a little lime. Needs straining a little better. 1s. 3d. per 1lb. jar.

W. COBB (Biggleswade).—The bottle had not sufficient packing round it, especially on the flat side; as a consequence it was smashed and box and letter were saturated with honey. So far as we could judge, it was a good sample of clover honey.

A. M. DE GROOT (Bromley).—The honey is mainly from fruit, with a little rhododendron. It will be suitable for the bees.

Special Prepaid Advertisements

Two Words One Penny, minimum Sixpence.

Will advertisers please read these Rules carefully in order to save trouble, as they will in future be strictly adhered to.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not permissible at above rate, but will be inserted at 1d. per word as* **"Business"** *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of 3s. per ¼in., or 5s. per inch.*

PRIVATE ADVERTISEMENTS are only intended for readers having **Surplus Stock** *to dispose of.* **Driven bees, Nuclei,** *and* **Queens that are reared or imported for sale,** *are Trade Advertisements, and can only be accepted under trade terms.*

Advertisements must reach us NOT LATER than FIRST POST on TUESDAY MORNING for insertion in the "Journal" the same week.

Orders for three or more consecutive insertions in "The Bee Journal" entitle advertisers to one insertion in "The Bee-Keepers' Record" free of charge.

PRIVATE ADVERTISEMENTS.

1 CWT. of honey at 80s., packages extra; sample 4d.—C. CLARK, Florence Villa, Locket-road, Wealdstone. v 54

YOUNG fertiles, two only, specially fine hybrids, 5s.—PAUL, Salisbury-road, Bexley. v 53

FOUR first class rose comb Rhode Island Red cockerels, De Graff's well known strain, splendid winter layers, 10s. each.—J. MOORE, Bleasby, Notts. v 52

EXTRACTED English honey, 80s. per cwt.; sample 2d.—DUTTON, Terling, Witham, Essex.

FOR SALE, twenty good bee hives, some nearly new, 5s. each; twenty shallow frame crates, 2s. each; joining Army.—E. BROWN, Melbourn, Royston, Cambs. v 50

INCANTO acetylene generator, for lantern, 20s.; small dynamo, suitable for charging accumulator, 10 volt, 5 amp., at 500 rev. per minute, 20s.; both in good order.—DYNAMO, "BRITISH BEE JOURNAL" Office, 23, Bedford-street, Strand, W.C.

BY APPOINTMENT.

IZAL

The Modern High-Power Germicide is a reliable remedy against Foul Brood and Isle of Wight disease.

From the B.B.J., July 22, 1915.

IZAL AND "ISLE OF WIGHT" DISEASE.

"I had lost twenty stocks when I tried Izal with my remaining three stocks which were very badly affected . . . The bees are now in very good condition, due solely to the use of this disinfectant."

Sold Everywhere in Bottles, 6d. and 1/- each.

Ask for full details of IZAL Treatment, sent post free by—

NEWTON, CHAMBERS & Co., Ltd., THORNCLIFFE, Nr. Sheffield.

HONEY, 2cwt., screw capped bottles, 12s. per dozen; eight 24lb. tins, 21s. per tin; free on rail.—W. COBB, Hitchin-street, Biggleswade. v 55

FOR SALE, by W. HERROD-HEMPSALL, Old Bedford-road, Luton, Ariel 3½ h.p. Motor Cycle and Side Car, in perfect condition; any trial or expert examination allowed; spares, belt, in leather case, two tubes, one cover, valve spring, back axle; all wheels fitted with Peter Union bands, back to saddle, horn, speedometer, three acetylene lamps, special luggage carrier on side car to carry two gallon can of petrol and one quart oil can, in addition to luggage. kick start, three speeds. Ridden by above, to be sold on account of medical advice; price £70.

YOUNG fertile queens, price 5s. each.—PRYOR, Breachwood Green. v 28

WHITE clover honey, 8lb. tins, g.w., carriage paid nearest station, 8s.; in bulk, f.o.r., £5 per cwt.—THE RECTORY APIARY, Eaton Bishop, Hereford. v 29

TEN strong hives, zinc roofs, 5s. each; thirty section racks, 1s. 3d. each; fifty feeding bottles, with stages, 1s. each; fifty queen excluder zincs, 1s. each.—X. Y. Z., "BEE JOURNAL," 23, Bedford-street, W.C.

WANTED, good Spaniel, for working thick cover, must retrieve well. Would find home for one duration of war, or purchase. Black Cocker preferred but not essential.—HERROD-HEMPSALL, Apiary, Luton, Beds. v 49

8 28lb. tins light English honey, 90s. cwt; sample 6d.—WOOD, Highfield House, Bolton-on-Dearne, Rotherham. v 46

BUSINESS ADVERTISEMENTS.

COMFORTABLE APARTMENTS for Brother Bee-keepers visiting Douglas. Terms: Tea, bed, and breakfast, 3s. 6d.; or full board, 5s. per day.—HORSLEY'S, Merridale House, top of Castle Drive, Douglas, Isle of Man.

1916 PURE Imported Golden Italian fertile queens, guaranteed healthy, vigorous, prolific, 4s.; specially selected, 7s. 6d. each, prompt dispatch.—J. B. GOODARE, Woden Apiary, Wednesfield, Wolverhampton. v 93

HONEY bottles, 1lb. screw caps and wads, 22s. per gross; Bacterol, 2s. 3d. per bottle.—HILDRETHS, 29, Suffolk-street, Birmingham. v 40

ROWE,

28a, Moy Road, CARDIFF,

SELLS Pure Honeys, Colonial and Californian, &c., carriage paid, tins free; cash. Samples 3d. BUYS Home-produced **Run Honey, Sections,** and Beeswax.

THE

British Bee-Keepers' Association.

The recognised centre of practical and scientific bee-keeping in Great Britain. Particulars and conditions of membership may be obtained from the Secretary.

W. HERROD-HEMPSALL, 23, Bedford Street, Strand, London.

IF YOU WANT GOODS QUICK, SEND TO BURTT,

Bee Appliance Manufacturer, GLOUCESTER.

Have you seen my new Catalogue? If not, you should. Send for it NOW.

ARE BEE-KEEPERS IMMUNE TO ZYMOTIC DISEASES?

In the BRITISH BEE JOURNAL for October 28, 1915, we published a letter from Mr. A. E. Staley, in which he remarked that "numbers of bee-keepers handle their bees freely, with little or no protection, and get stung so frequently that they become immune: that is, they feel the stings hardly at all, and the poison does not make their flesh swell. We may call these immunes. Now I have noticed that no immune person has ever suffered from cancer, consumption, neuritis, or any form of zymotic disease. I have made many inquiries, and have never been able to find a single case of an immune so suffering. Bee poison consists chiefly of formic acid, one of the strongest antiseptics known, with slight traces of malic and other acids. The natural inference is that the formic acid purifies the blood from noxious germs. Consequently the immunes do not suffer from zymotic diseases; and their blood being healthy their organs remain healthy, and they die only by the natural decay of old age or by accident. The suggestion and inference is that zymotic diseases could be cured or warded off by injections of an antiseptic on the basis of bee poison."

We have this week received a further letter on this matter from Mr. Staley, in which he says he has been asked by the Royal Faculty of Medicine to make further inquiries into the subject.

As he will probably be engaged on war work he has asked us to help him. In the course of his letter he says: "I have been much interested to learn that French doctors send their consumptives to keep bees, and this practice supports my theory. It is, you understand, an inquiry as to health of *immune* bee-keepers—immune to the poison—and not an inquiry as to the health of persons occasionally stung, or who keep bees and protect themselves against stings."

The subject is a most interesting one, and if any of our readers can throw any light on it we shall be much obliged if they will write us, not necessarily for publication in the Journal.

BRITISH BEE-KEEPERS' ASSOCIATION.

The Council of the British Bee-Keepers' Association are anxious to obtain gifts of honey for the wounded soldiers in the London Hospital, where it is urgently needed both for food and medicinal purposes. They will, therefore, be grateful for gifts of same, no matter how small, from bee-keepers throughout the British Islands. It is unnecessary to explain our obligations to these brave fellows, who have sacrificed health and limbs for the sake of our country. Gifts should be sent addressed to the Secretary, B.B.K.A., 23, Bedford Street, Strand. The donors' names will be published in the "B.B.J." and RECORD.

W. HERROD-HEMPSALL,
Secretary.

HONEY FOR LONDON HOSPITAL.

Amount already received	...	261¼ lbs.
Mr. W. Cobb	..	7 lbs.
Total	... ...	268¼ lbs.

QUESTIONS IN PARLIAMENT.

The following questions were put on Thursday, October 12, 1916:—

SIR WALTER ESSEX: To ask the Parliamentary Secretary to the Board of Agriculture, whether the Board have yet discovered any cure for "Isle of Wight" disease in bees, or whether their experiments have indicated any means for mitigating the virulence of this pest; and are there any signs other than depletion of stocks of bees in the country that the disease is showing signs of abatement?

MR. ACLAND: The Board are testing a method of dealing with the disease, and the results are promising, but a final opinion cannot yet be expressed. There is no evidence, unfortunately, that the virulence of the disease is abating.

SIR WALTER ESSEX: To ask the Parliamentary Secretary to the Board of Agriculture whether, in view of the disadvantages which in many districts of the country fruit growers are under owing to the destruction of many thousands of bees, his Board are proposing to confer with bee-keeping associations or other persons or bodies interested, with a view to re-introduce legislative proposals to combat and control the vast ravages of this pest.

MR. ACLAND: As it is considered impracticable during the war to deal effectively with this disease by means of legislation the Board are of opinion that no useful purpose would at present be served by a conference such as my hon. friend suggests. But I shall be happy to bear his suggestion in mind.

CRAYFORD AND DISTRICT BEE-KEEPERS' ASSOCIATION.

CONVERSAZIONE, Saturday, October 28, 1916.

Arrangements have been made to hold a conversazione at St. Paulinus Hall, Crayfor (near Parish Church), on Saturday, October 28, commencing at 4 p.m.

PROGRAMME.

4 p.m.—Lecture by Mr. G. W. Judge. Subject: The Restocking Scheme, its Objects, Development and Achievements.

4.45 p.m.—Tea (provided by the Social Committee).

5.30 p.m.—EXTRAORDINARY GENERAL MEETING.

6 p.m.—Practical demonstration by Mr. G. H. Barnes, on Wax-extracting, refining, and moulding.

The Council extend a hearty invitation to all interested persons.

AGENDA FOR GENERAL MEETING.

To decide Association's future title and organisation. The Council recommend and the Secretary will move :—

"That with the consent of the B.B.K.A. the title of this Association be henceforth changed from the Crayford and District Bee-keepers' Association to the Kent Bee-keepers' Association, and that the Rules be amended accordingly."

In the event of the above resolution being carried the Council will submit a proposal for reorganisation by which the Mid-Kent B.K.A. will be invited to join us in an effort to secure both direction of policy and co-ordination of effort for the encouragement of bee-culture in Kent. The Council of the Mid-Kent B.K.A. are unanimously in favour of the proposed reorganisation.

The demonstration by Mr. Barnes is likely to prove of exceptional value to members, as wax-rendering is a phase of apiculture often neglected by the average bee-keeper.

PHOTOGRAPHS—HONEY SHOW.

The negatives of the three groups taken at the Honey Show in August by Mr. Dewey have been, very courteously, turned over to the Association to enable prints to be supplied to those members who desire to procure them. A quotation has been obtained for the supply of a number of these photographs, whole-plate size (8½ ins. by 6½ ins.), suitably mounted on plate-sunk mounts, and these can be purchased for 1s. 6d. each. There are three separate photographs :—

1. Large Group (reproduced in "Record" for October, 1916).
2. Special Committee.
3. Council.

Orders should be sent to the Hon. Secretary as soon as possible, so that an order for the total number required can be placed.

Enlargements of either of above can also be supplied; size of print 18 ins. x 12 ins. mounted, price 6s. each.

INTERMEDIATE EXAMINATION.

An examination of candidates for the B.B.K.A. Intermediate Certificate of Proficiency in Bee-keeping will be held at Maypole House on November 25 next. Only candidates who possess the Preliminary Certificate are eligible. B.B.K.A. fee: members, 10s.; non-members, 20s. Those who intend sitting should notify Secretary at once so that arrangements can be made.

G. W. JUDGE, Hon. Secretary.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

GERMICIDES AND "ISLE OF WIGHT" DISEASE.

[9355] Your correspondent, Mr. Stone, puts the treatment of "Isle of Wight" disease in a nutshell when he states: "It appears essential . . . to have a strong germicide *always* present to prevent the spores of disease germinating into active bacteria. . . . [The italic is mine.]

I believe that only with the help of a germicide can we battle against the disease. Bee-keepers think that if a stock is once cured it must remain cured. But why? If the disease recurs in the autumn after being cured in the spring, it does not prove that the cure was a failure. It does not prove that the disease was latent within the hive. Surely, it can be again contracted from the outside as it was originally. Again, those bees that were cured in the spring would in the ordinary course of events be dead in the autumn, and there is nothing to prevent a fresh lot of bees from contracting the disease

when one takes into consideration that they are foraging flower after flower, that perhaps infected bees from other hives have previously visited, and one must not forget that the disease can be spread by wasps and robber bees.

I had two hives die of "Isle of Wight" disease during last winter. At the end of May, 1916, I hived a fresh lot of Dutch bees on to the infected combs with the usual results: a bad attack of Microsporidiosis: crawlers by the hundred, until the bees barely covered four combs. I started spraying the alighting board with Izal, but, in my opinion, it made the dysentery worse, as the smell of the Izal meant an increased consumption of stores.

It then occurred to me that if I could only get the bees to *always* drink a little Izalised water, I could prevent the spores from germinating into the active stage. I think it is generally admitted that there is no germicide that will penetrate the "armour plated" spores without killing the bees; but there are several powerful enough to destroy the organism in its active stage.

I obtained a drinking fountain and filled it with 3 or 4 drops of Izal to the quart of water, and added half teaspoonful of salt. It is essential that salt be added, or the bees will refuse to drink. The result was surprising: the crawlers began to lessen in numbers, and the bees attained that vigour one likes to see. It was not long before they covered ten combs, and were crowded into the super of eight shallow combs, giving me a surplus of 18 lbs. of of honey.

As a further test of the efficacy of Izal, I took out three of the combs with bees and queen cell, and placed them into the No. 2 hive among the infected combs on which the bees died during the winter, placing the three infected empty ones in the No. 1 hive. This was the last week of July. Up to the present there has been no sign of a recurrence of the disease.

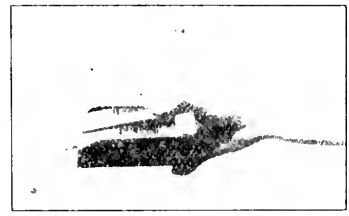
There is no difficulty in getting the bees to drink Izalised water, providing the salt is added, as bees always prefer any salt water to fresh. I have seen the board of the drinking fountain absolutely covered with bees, not only my bees, but from neighbouring apiaries; especially is this the case in the evening of a hot summer's day, when Italians, goldens, blacks, etc., can be seen drinking together.

Perhaps, Sir, you could tell me why the bees of the neighbourhood use my fountain? Do bees usually have a common drinking place? If so, it would certainly be a great factor towards the spread of disease. Perhaps if all bee-keepers were to place inverted jam bottles filled with Izalised water about their apiaries in the spring, we might hear considerably less of the "Isle of Wight" disease in 1917. I intend giving the bees some medicated candy for the winter on top of frames, so as to keep the germicide *always* in front of them.—TOM BRIGHT.

[Bees do not usually have a common drinking place. There may have been no other place near where they could procure water, or the salt may have attracted them. Probably both factors caused so many bees to come to the water you provided. The spread of the "Isle of Wight" disease is no doubt due more to contaminated water than to any other cause. —EDS.]

CAGE FOR HOLDING QUEEN TEMPORARILY.

[9356] In a recent issue of your BRITISH BEE JOURNAL you show your expert with a queen bee in her mouth while she is operating on a hive. Now there must be a large number of bee-keepers like myself that would not have sufficient confidence in themselves to attempt any such way of holding a valuable queen. In the first place, it is to catch the queen; 2nd, to transfer to mouth: 3rd, to re-transfer back



TEMPORARY QUEEN CAGE.

from mouth to finger and thumb. If no worse, she certainly cannot be any better for holding and handling so long, or so many times, and possibly, by accident, roughly. I enclose a photograph of a small invention of my own to take the place of that method for bee-keepers like myself. Just a glazed mouse-trap. The glass (two pieces) is so arranged that all is held in place by three small pieces of wood: the top one screwed on so that it can be removed and glass taken out and cleaned if desired. A queen is caught in an instant, as the lid is held up with a finger of hand that holds the trap, and dropped as soon as you observe queen through glass. The trap can then be put on ground, or stand, and there and then any operation carried out.

I have just packed five strong stocks of bees up ready for home from the moors. Results, packed full up below with honey, but only ten complete sections above on five strong stocks.—P. NEWTON.

GOOD NATURE—AND OTHERWISE—AMONG BEE-KEEPERS.

[9357] "Only one of last year's novices," I should yet be glad if you would grant me space to comment on the recent letters in your journal anent the Hydrogen peroxide experiment.

Last winter I determined to keep bees, and bought or borrowed all the literature I could obtain on the subject. I was impressed from the commencement with the fine spirit in which the books were written and the mutual helpfulness and generosity of those who followed the craft.

When the season permitted, a friend gave me a stock of bees, and I was immediately helped by a farmer, who left pressing duties to give aid to a novice. He, in turn, told me of a gentleman near who knew a great deal about bees, and, with some misgiving, I ventured to call without other introduction, hoping for advice. I was welcomed and helped then, and have been ever since, by this expert just as if I had been an intimate friend; and by the generous aid of this man of outstanding skill in bee management I have now six colonies.

All this induced me to believe that bees exerted some benignly potent influence to bring out all the best in human nature, and I was confirmed in this belief by the first copy of your journal which I ever read, in which a kindly and learned Christian gentleman modestly and courteously told bee-keepers of a treatment which had helped his bees suffering from disease—not hugging his discovery to himself as a lesser mind would have done, nor endeavouring to exploit it as a prudent man might be excused for doing, nor assuming airs such as the find entitled him to, but freely imparting it, palpably in the hope that others would benefit.

From subsequent letters others did benefit, and recorded their gratitude in as generous a spirit as that in which the aid was given.

I ordered the journal to be sent from a newsagent weekly, thinking what a nice and kindly lot of people wrote to it, and what a healthy breezy spirit there was about them all. when, to my amazement, a curmudgeon appeared among them, and I was amazed by a number of abusive and ignorant letters from a bumptious person quite foreign to the soul of anything I had read in print in a bee-book before, apparently out of place in your interesting journal. Naturally, though I have read a good deal of the literature obtainable about bees, which anyone must who loves them, my experience is practically none, and I do not pretend to know who is right in the matter, but the application of $H_2 O_2$ in the manner suggested certainly sounds sane, in view of the value of Oxygen to animal and insect life, and it could do no harm if it did small good, but the insolent and abusive attack on the kindly clergyman who tentatively suggested the remedy, and upon all who ventured to try it was as uncalled for as it was disgusting, and the offensive nature of this critic's whole bearing caused me, and apparently more of your readers, a great deal of indignation.

Though knowledge and deep learning generally accompany a modest bearing, I was unreasonably prepared to hear that this critic was a man of fame who had conferred outstanding benefits as the results of his research in the bee-keeping world, and I made inquiries in several quarters among experts, only to find that he is a person of no importance whatever other than what his own imagination confers upon him, and is, indeed, an entirely negligible unit of the bee-keeping fraternity.

The copious use of profound terms in his diatribes could not fail to remind one of that ignorant type of gardener we all know, who glibly pelts one with a string of Latin names acquired parrot-wise, generally wrongly-placed, and ridiculously pronounced.

I was not surprised to learn from his own letters that all his bees were diseased, but I was astonished at the impertinence which presumed to label others with healthy stocks or mending stocks "blind" and "leaders of the blind," and the Simian secretiveness of the person in regard to his own believed cure is on a level with his dark vaticinations to our friendly vicar's bees.

The one man and the helpful Christian gentleman says: "I helped my bees by such means, and, if anyone can profit by my experience, here's the formula, and God give you good adventure—my bees are doing well."

The sour and insolent critic seems to reply: "This man is a quack and a charlatan, and anyone who follows his advice a fool. I would not waste my time and money trying a remedy which, being all-wise, I know to be no cure. I have a cure which I will hug to myself till *I choose* to impart it, meanwhile for want of it everyone's bees may die (or I shall be disappointed), and every bee-keeper must wait with bated breath till I (Sir Oracle) choose to open my mouth. You can try any remedies you like, but it won't be of any use—my bees are all diseased."

I feel indignant with this critic for spoiling my theory that all bee-keepers were gentlemen, and all courteous and all generous and helpful. I have not been a bee-keeper long enough to refrain from saying what many have no doubt wished to say, but I think every reader of your journal will be able to discriminate which

between these two, the helper or his self-anointed mentor, is a gentleman, which is wise and which ignorant, which is likely to be of use and which churlish to mankind, and which a vexation thereto.

Who knows but what a man's spirit may affect his own bees? If so, one cannot wonder if the clergyman's bees are strong on the wing; and in this connection I may mention that I fed my bees up for the winter without vinegar from faith in the superstition!!!

If Dioxogen will help, why not Oxygen itself, which could be sprayed into a hive winter or summer from a common cylinder?—WALTER CAMM

NOTES FROM NOTTS.

[9358] It is now just over a year ago since I wrote and told you how having tried many things to cure Isle of Wight disease and failed, I burnt my last stock at home. I was left with six stocks at my place of work half a mile away. I packed them in October, 1915, with plenty of stores.

On looking up early this spring I found four very weak, with plenty of food; the other two being swarms in 1915 were a bit stronger, so I took them home, as you said I might try again this spring. I had done all I could to kill any germs that might be about. I used a large bucket of strong Jeyes' fluid, so strong that it killed every bit of grass that it touched, and also dug lime into the garden. Well, by the end of April the four stocks had dwindled away and died. I cleared all hives away, and covered the ground around with lime, so that I started this spring with the two stocks at home, neither very strong.

I gave the candy, into which I had put Izal; they ate this up. Soon they were working for themselves with no sign of the dreaded "Isle of Wight" disease. These two were from Italian parents. Thinking that one strong stock would be better than two weak ones, I decided to build up one at the expense of the other. I got No. 1 hive very strong, and as the weather was very dull, and the bees could not fly much, they swarmed. Not having any standard frames ready I hived them on shallow frames until the next day, when I took ten of the best frames out of the hives where the bees had died off. I scraped the bars, boiled the metal ends, and mixed some Izal and water, and with a garden syringe gave them a good washing. After one hour the bees were on them. In three or four days four combs were drawn out and filled with eggs. I noticed for a day or two the hive was covered with white excrement, which I cleaned off.

The swarm gave me 30 lbs. of honey; the parent stock 34 lbs. The season being very late all three got nearly enough food for winter, which means something, with sugar at 6d. a lb.

In March I gave a friend three miles away a sovereign, and he put a strong stock of natives into one of my hives for me. I put them on a new stand at my work-place. They also swarmed, but, thinking about sugar, I removed all queen cells and returned the bees. They were out again in nine days. I repeated the same thing again. After this they set to work, and gathered 64 lbs. of surplus honey, which for this district is very good indeed. I am delighted to say that now, after all my trials, I have been rewarded by not seeing a crawler about all the season. Several things I have done which may seem simple. First, I have made it a rule every day to pick up every dead bee I have seen about, as I think they are no good lying around. Second, I have washed my hives with strong Izal and water. Also syringed all around the hives twice a week, and sent some into the entrance of the hives.

I have been very interested in the correspondence in the JOURNAL. I read every bit, often before I have my tea. Now I was so pleased with Rev. Hollis' first letter on the use of Dioxogen for "Isle of Wight" disease, that, knowing a friend who has a fine apiary of twelve stocks, who said something was wrong with his bees, I walked over the same night that I read the letter to let him also read it, and advise him to try the remedy. I found several stocks very bad with "Isle of Wight" disease. My bees having had it I knew at once what it was. Well, he has tried it, and last week I went to see how he was getting on. He said he believed that his bees would get free from the disease again, as very few from one hive only were crawling.

Not many have thanked Mr. Heap for his letter. I do, because it has caused so many to sit down and write about their experience with the "Isle of Wight" disease. I also thank Mr. Hollis. I have another bee friend who has been very kind to me with advice and help, though we are a long way apart, and have never met. He also is a reverend gentleman. After my letter last year several bee friends wrote giving me advice.

Five years ago no one kept bees in our village, and very few bought honey. I have talked it up, had a few bottles on show, and told my friends to *eat* it not *keep* it. The result is I have sold my own 127 lbs., bought from my friends 60 lbs., sold that all retail at 1s. 2d. a jar, and my customers state they want more. Many people bring jars back as they are so dear. I have plenty of the

tie-over jars at 8d. a dozen. Wishing you and your little paper success. I forgot to say that a well-known firm of chemists are making a show in their windows here with "New Season's Honey," 10d. lb. jar; 6d. ½ lb. jar. Feeling a bit put out at this mean show I went in and asked the manager if he would guarantee it English. He asked what I wanted to know for. I said: "If you will I will have a lot of it," but he said he could not. I opened a jar, and had a smell, although I am not an expert, but I told him that it had not even the smell of honey, to say nothing about the taste.—G. WARD.

USING BACTEROL IN CANDY.

[9359] We have received a large number of inquiries through your columns as to how the winter food of bees should be medicated with Bacterol, which has been found to be completely successful in curing "Isle of Wight" disease. Will you, therefore, allow me to point out that in medicating syrup a teaspoonful of Bacterol (General) should be well stirred into a pint of syrup as it is cooling. Bees like it, and take it readily.

In making candy, crystallisation quickly sets in upon stirring after removal from the fire or gas. We, therefore, advise the addition of two teaspoonfuls of Bacterol (General) to the pint of sugar to allow for evaporation owing to the high temperature.

In order to get the fine smooth grain so desirable in candy, when the boiling is complete and the sugar is withdrawn from the fire, it should be allowed to stand *without stirring* until the finger can be held in it for a short time without inconvenience. The mass should then be stirred rapidly until it becomes white and stiff, when the vessel is again placed over the fire, and the candy warmed until it will run freely, stirring all the time. The Bacterol should now be added, well stirred in, and the candy poured into the moulds or boxes.—J. G. SPARKHALL, Managing Director, Bacterol, Limited, 19-25, Brookside-road, Highgate, N.

PRESS CUTTINGS.

BEE-KEEPING: RAISING AUTUMN BEES.

The commonest mistake made by bee-keepers whose experience is not very extensive is that of supposing that bees gather honey as long as there are flowers in the fields and gardens. Undoubtedly bees never neglect any possible source of nectar, but it ought to be borne in mind that outside the cultivated flower garden there is really a great dearth of flowers after the end of July. Such as there are, with the exception perhaps of the thistles and, of course, in certain districts the heather, do not yield much honey. As soon as the limes and the white clover have finished the income of the hives is barely sufficient to supply more than daily needs, and, in fact, I have found by direct experiment that a hive weighs less every day after the beginning of August. In favourable weather the loss is not great, amounting perhaps to no more that ½ lb. a week, but still, however gradual and imperceptible the decline, it is nevertheless a fact that from the end of the clover flow the hive begins to live on its stores.

It is important, of course, that the stores should be adequate to admit of this constant lessening, which will go on more or less until the following April, but there is a danger in having too great a surplus in the hives at the end of the flow. If all the brood combs are choked with honey the activities of the queen cease, and the natural consequence is that not only the stores but the population also falls away very rapidly. Bees raised during May and June have had to work very hard, and during autumn and winter the mortality among them is very great. If young bees are not raised to take their place the colony is bound to dwindle very severely, and in a cold, windy spring it often happens that such colonies die out completely for lack of sufficient bees to maintain warmth and carry on the activities of the hive.

The raising of autumn bees is therefore a matter which should engage the attention as soon as the supers have been removed. Without any delay an examination should be made of the whole brood chamber, and if it is obvious that breeding space is limited steps must be taken to supply it. The outside combs are usually the heaviest and free from brood, and two of these should be removed. They may be stored away for use later in the season, or they may be extracted and returned empty to the bees. In the former case two frames of foundation should be supplied in place of them, and these are placed in the centre of the chamber. To encourage the bees to draw them out a slow feeder should be put on, care being taken not to supply so much that the comb will be filled with it before the queen can begin laying. In this way we secure not only a good supply of young bees, but also a couple of nice clean combs, which are in the best position for early brood raising in the following season. The feeding bottle need not be kept on more than a fortnight, for by that time the new combs

should be filled and a large part of the brood already sealed.—HERBERT MACE. From *The Field*.

AN AUTUMN DIARY.

SEPTEMBER 17.—Though the night be so chill that bees which fail to reach home are found in the morning crawling over the garden soil half stupefied with cold, when the warming sun breaks through there is a hum of insects about the Michaelmas daisies which takes one's fancy back to high summer. For where the violet and mauve and blue-rayed gold of these autumn beauties is spread in vivid mass, there also is almost the last of the ample feasts which the flowers offer to the nectar-sippers. After the Michaelmas daisies there remains only the bloom of ivy to provide them with food in really liberal quantity.

All through the sunny hours, with steady droning, the winged host crowd to the golden tables of the flowers. Bees of many kinds, wasps, flies large and small—a motley company and all hungry. The wasps come because their prey, the flies, come, and for the same reason the garden spiders hang cunningly placed snares everywhere between the sprays of blossom. So for all the music of the opulent hours among the sunlit Michaelmas daisies there is tragedy lurking at the feast.

Twilight finds some of the sippers still at the flowers drinking long after they should have sought shelter. Then night falls and the night cold catches them. They cannot get home now. The morning sees them blundering over soil and foliage or lying on their backs feebly kicking. They are half-numbed and helpless—easy victims to all their foes until the returning sun brings them new life and energy. —P. W. D. I., in the *Daily Mail*.

BEESWAX EXPORT PROHIBITED.

The Board of Trade are in receipt, through the Foreign Office, of information to the effect that a Decree of the Russian Minister of Finance prohibits the exportation of beeswax via all frontiers of the Russian Empire. Exceptions to this prohibition may be made by the Ministry of Finance in favour of Allied and friendly countries.—From the *Financier and Bullionist* (Russian Section).

HONEY IMPORTS.

The registered value of honey imported into the United Kingdom during the month of September, 1916, was £20,463.—From a return furnished to the BRITISH BEE JOURNAL by the Statistical Office, H.M. Customs.

Notices to Correspondents

L. G. L. (Kensington).—(1) If it was possible to confine the bees to that area it would not support one hive. (2) It depends what you mean by an "indefinite number." Not more than fifty in one locality would probably be best.

Suspected Disease.

RYDAL MOUNT (Yorks). They are suffering from "Isle of Wight" disease.

MR. W. E. RICHARDSON, Whitkirk, Leeds.

Honey Sample.

M. H. (Burley).—The honey is heather blend. The flavour is good, density fair.

Special Prepaid Advertisements

Two Words One Penny, minimum Sixpence.

Will advertisers please read these Rules carefully in order to save trouble, as they will in future be strictly adhered to.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not permissible at above rate, but will be inserted at* 1d. *per word as* "**Business**" *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of* 3s. *per* ¼in., *or* 5s. *per inch.*

PRIVATE ADVERTISEMENTS are only intended for readers having **Surplus Stock** *to dispose of.* **Driven bees, Nuclei,** *and* **Queens that are reared or imported for sale,** *are Trade Advertisements, and can only be accepted under trade terms.*

Advertisements must reach us NOT LATER than FIRST POST on TUESDAY MORNING for insertion in the "Journal" the same week.

Orders for three or more consecutive insertions in "The Bee Journal" entitle advertisers to one insertion in "The Bee-Keepers' Record" free of charge.

PRIVATE ADVERTISEMENTS.

INCANTO acetylene generator, for lantern, 20s.; small dynamo, suitable for charging accumulator, 10 volt, 5 amp., at 500 rev. per minute, 20s.; both in good order.—DYNAMO, "BRITISH BEE JOURNAL" Office, 23, Bedford-street, Strand, W.C.

WANTED, two strong lots driven bees, or skeps.—RECTOR, Gislingham, Suffolk. v 57

"WINDSOR" Extractor, with cover, extra stout 1in. fitted treacle valve, extracts two combs, also sections; 15s., on rail.—DYER, 8, Orchard-road, Colchester. v 58

WANTED, in bulk, second or third class Honey.—Apply, BOX 2, BEE JOURNAL Office, 23, Bedford-street, Strand, W.C. v 59

FOR SALE, two very fine surplus Italian hybrid queens (1916), prolific and healthy, 4s. each. —CROWE, Stawell, Bridgwater. v 61

FOR SALE now, or can be bespoken for next spring, several strong healthy stocks of bees in straw hives, each complete with 1in. elm floor board and stand; black bees, with some Carniolian blood; splendid honey gatherers and quiet; price 20s. each.—WHITESIDE, Kilham, Great Driffield. v 60

SECTIONS; four dozen in cases, 48s.—F. A. BEAN, Snaith, Yorkshire. v 62

EXTRACTOR, equal new, geared, 32s.; ripener, 14s.; 7lbs. brood foundation, 2s. 3d. per lb.; three rapid feeders, 1s 6d. each; wax extractor, 11s.—BOWEN, Apiary, Cheltenham. v 63

HONEY, 2cwt., screw capped bottles, 12s. per dozen; eight 24lb. tins, 21s. per tin; free on rail.—W. COBB, Hitchin-street, Biggleswade. v 55

BY APPOINTMENT.

IZAL

The Modern High-Power Germicide is a reliable remedy against Foul Brood and Isle of Wight disease.

From the B.B.J., July 22. 1915.

IZAL AND "ISLE OF WIGHT" DISEASE.

"I had lost twenty stocks when I tried Izal with my remaining three stocks which were very badly affected . . . The bees are now in very good condition, due solely to the use of this disinfectant."

Sold Everywhere in Bottles, 6d. and 1/- each.

Ask for full details of IZAL Treatment, sent post free by—

NEWTON, CHAMBERS & Co., Ltd., THORNCLIFFE, Nr. Sheffield.

FOR SALE, by W. HERROD-HEMPSALL, Old Bedford-road, Luton, Ariel 3½ h.p. Motor Cycle and Side Car, in perfect condition; any trial or expert examination allowed; spares, belt, in leather case, two tubes, one cover, valve spring, back axle; all wheels fitted with Peter Union bands, back to saddle, horn, speedometer, three acetylene lamps, special luggage carrier on side car to carry two gallon can of petrol and one quart oil can, in addition to luggage. kick start, three speeds. Ridden by above, to be sold on account of medical advice; price £70.

TEN strong hives, zinc roofs, 5s. each; thirty section racks, 1s. 3d. each; fifty feeding bottles, with stages, 1s. each; fifty queen excluder zincs, 1s. each.—X. Y. Z., "BEE JOURNAL," 23, Bedford-street, W.C.

WANTED, good Spaniel, for working thick cover, must retrieve well. Would find home for one duration of war, or purchase. Black Cocker preferred but not essential.—HERROD-HEMPSALL, Apiary, Luton, Beds. v 49

BUSINESS ADVERTISEMENTS.

COMFORTABLE APARTMENTS for Brother Bee-keepers visiting Douglas. Terms: Tea, bed, and breakfast, 3s. 6d.; or full board, 5s. per day.—HORSLEY'S, Merridale House, top of Castle Drive, Douglas, Isle of Man.

TWO heavy healthy stocks in skeps, £1 each; grand young heather queens, 2s. 6d.—HOOD, Expert, Pickering. v 56

1916 PURE Imported Golden Italian fertile queens, guaranteed healthy, vigorous, prolific, 4s.; specially selected, 7s. 6d. each, prompt dispatch.—J. B. GOODARE, Woden Apiary, Wednesfield, Wolverhampton. v 93

HONEY bottles, 1lb. screw caps and wads, 22s. per gross; Bacterol, 2s. 3d. per bottle.—HILDRETHS, 29, Suffolk-street, Birmingham. v 40

ROWE,

28a, May Road, CARDIFF,

SELLS Pure Honeys, Colonial and Californian, &c., carriage paid, tins free; cash. Samples 3d. BUYS Home-produced **Run Honey**, Sections, and Beeswax.

THE

Standard Health Food Co., Reading,

with which is amalgamated

The Berkshire Honey Co.,

are buyers of Honey in Sections, in any quantity. State price and quantity for Cash.

Office 133, FRIAR STREET, READING.

The Pharmaceutical Journal says:—The Standard Health Food Co. are a firm with a world-wide reputation for honey.

Their "Joybells" Honey is a honey of brilliant appearance and good consistence, with the delicate natural flavour, and is guaranteed to be pure honey as extracted from the comb.

IF YOU WANT GOODS QUICK, SEND TO BURTT,

Bee Appliance Manufacturer, GLOUCESTER.

Have you seen my new Catalogue!? If not, you should. Send for it NOW.

Editorial

BRITISH BEE-KEEPERS' ASSOCIATION.

The monthly meeting of the Council was held at 23, Bedford Street, Strand, London, W.C., on Thursday, October 19, 1916. Mr. W. F. Reid presided. There were also present: Miss M. D. Sillar, Messrs. C. L. M. Eales, G. F. Faunch, G. J. Flashman, T. Bevan, G. W. Judge, G. R. Alder, A. G. Pugh, J. Herrod-Hempsall, G. Bryden, J. Smallwood, J. B. Lamb, Association representatives, G. Horscroft (Essex), W. W. Prior (Crayford), and the Secretary, W. Herrod-Hempsall.

Letters expressing regret at inability to attend were read from Sir Ernest Spencer and Mr. E. Walker.

A vote of condolence with Mr. Lamb in the loss of his son, Lieut. Lamb, of the R.F.C., whilst flying at Salisbury Plain, was passed, and acknowledged by Mr. Lamb.

The minutes of the Council meeting held on September 21 were read and confirmed.

Mr. C. E. Cleeves was elected a life member, and the following ordinary members were also elected: Mr. W. J. Hall, Capt. J. Buckley, J.P., F.Z.S., Mr. T. T. Pickering, Mr. H. Samways and Mr. E. Stone.

The report of the Finance Committee was presented by Mr. Smallwood, who stated that payments into the bank for September amounted to £50 16s. 6d., the bank balance at the end of September being £127 1s. Payments amounting to £8 4s. 6d. were recommended.

It was resolved that a Roll of Honour of all bee-keepers in the United Kingdom killed, wounded, or obtaining special distinction be prepared to hang in the Council Chamber, and that to this end an application be printed in the BRITISH BEE JOURNAL asking for particulars of the above to be sent in for tabulation.

Next meeting of Council, November 16, 1916, at 23, Bedford Street, Strand, London, W.C.

The Council of the British Bee-Keepers' Association are anxious to obtain gifts of honey for the wounded soldiers in the London Hospital, where it is urgently needed both for food and medicinal purposes. They will, therefore, be grateful for gifts of same, no matter how small, from bee-keepers throughout the British Islands. It is unnecessary to explain our obligations to these brave fellows, who have sacrificed health and limbs for the sake of our country. Gifts should be sent addressed to the Secretary, B.B.K.A., 23, Bedford Street, Strand. The donors' names will be published in the "B.B.J." and RECORD.

W. HERROD-HEMPSALL,
Secretary.

HONEY FOR THE LONDON HOSPITAL.

Amount already received ...	...	268½ lbs.
Miss F. B. Paterson ...	...	14 lbs.
Mr. J. Wheeler ...	...	4 lbs.
Mr. W. Raymond ...	...	2 lbs.
Total ...	...	288½ lbs.

BLURTS FROM A SCRATCHY PEN.

AUTUMN.

Through the woods and over the fern-clad hills autumn is stealing. 'Tis early evening, yet, ere the westering sun has levelled with the plains, you may trace where wind the river and the brook by the grey mist which, rising, trails across the meadows, a seeming, never-ending cloud. Faster still the crimson swathes the fading light. The twilight spreads. Straight from the cottage roof rise, in twisting pillars, the smoky columns. Along the pathway by the woods the tired labourer wends his homeward way; a moment he stays to light his pipe. Flickering brilliantly in the gathering gloom, the flash betrays his toil-worn face. How fiercely burst the rays through the chinks in the windows of the village smithy, as the white-hot iron is drawn from the fire; and the sparks, how they chevy and chase each other while strikes the hammer; and by the home hearth the fire is welcome now, for chilly grow the evenings, and the nights are lengthening!

Scarcely yet have all the leaves fallen. There are still a few remaining. Veterans of a great army, day by day their numbers lessen. Playthings of every gust that blows above the zephyrs' breath, they whirl, and flutter, and lightly fall, so lightly, that one can scarcely hear them rustle, as they touch their comrades who have preceded them. There they lie in the woods, a carpet, yellow and brown, and flecked with green, where the short herbage peeps through. The saucy squirrel, with tail arched over his back, peeps at you from among them. He wonders if you watched him hide that nut. The rabbit squats hidden, as he thinks, from view, but sudden nervous, bolts, scattering leaves on every side, as he dashes through the bracken. You can follow him by his white tail, whisking, as he bounds along. Oh! 'tis a merry cover for all the creeping things which love the

good, brown woods. As you walk along, crushing the mosses and the leaves, how sweet the nutty perfume that exudes!

Listless are the hives. In the noontide sun, the warmth and brightness tempt a few bees, the youngsters to play about the entrance, but under the coverings they snug and cluster. Disturb them not, for their long winter sleep is coming now, and drowsily they cling to their combs, for with the earliest frosts the daisy, the sunflower, and the ivy trailing over the church tower, ceased their yield. Surely they have earned their rest. Let them enjoy it, even as all other insects. For the queen wasp has found in the cottage thatch where she may securely hide. The bombus and all other cousins of the *Apis* family, even the gnat and the fly, look for them in the old trunk midst the wind-blown leaves, or under the eaves, where the chimney's warmth makes cosy corner.

And how, in words, may I paint the glory of the woods? Gold and crimson, and russet brown and silver. Where the running brooks flow through valley, miniature furrows seam the crested forest. In the lights and shadows, every moment the colours change in the playful wind; now it sways them forward as their leaves were wont to grow, and again in merry mischief, turning, ruffles them, to let their lighter tints be seen. Cloud shadow chases cloud shadow. Berries, red and purple, with nuts so brown, hiding and unhiding themselves, and always and ever to the soft music of the winds which, whispering, murmuring, seem to crave pardon for their violence.

And over all, and through all, there penetrates a quiet sense of rest; one feels it, and sees it, yet can scarce describe it. Perhaps it is that the light of the sun, subdued by mists, is fierce no more; perhaps it is Nature's expression of work well done. Beautiful is the spring, glorious is the summer, but autumn is the harvest, the gathering in, the accomplishment of all.

J. Smallwood.

MANAGING PROLIFIC BEES.

There are few more important subjects than the restraint of prolific bees from swarming. I hope we may get a good stream of experience to help us before the danger reappears of our best honey-gathering forces being dispersed, and the hope of a harvest with them.

Would not the modified Demaree plan, noted in your number of October 12, be improved by putting the new set of brood combs under instead of over the brood body? Surely the queen would work down better than up, the bees storing above the brood and driving it down. Supers could go over all, and the arrival of clover bloom ought to put the swarming idea finally out of vogue. Would it be very rash to hope that if the business was taken in good time, and the queen was a young one, the bees would even carry starters all the way down in worker comb? Taking the Sheppard plan just as it stands, why the second excluder between second and third storeys? If you want to mate a queen up there, the wire cloth is necessary, otherwise an excluder serves no purpose that I can see. One American plan is something like this with the wire cloth, and then when the virgin is out the cloth is removed, and she goes down and supersedes the lower queen. That brings a slight break in the egg-laying, and perhaps makes the bees think they have swarmed. The Alexander plan follows Demaree till the brood in the upper storey is all sealed. Then that body is removed, and forms a new colony, and the two together bring in a surplus equal to that the whole hive would have done, and the swarming danger approaches zero.

"G. D. C." in the same issue waits till the colony is "thinking of swarming." This seems too long, as most people say that scarcely anything will stop a swarm if things have gone as far as that. It is the Demaree plan with a nucleus bagged out of the top storey, nevertheless it has to be repeated in two months' time if swarming is to be again prevented. As it results in a 200 per cent. increase, it can scarcely be called swarm prevention.

Last year I spread a brood body into two, alternating empty frames all through on April 30, and supered May 15. There was no swarm, and the surplus was 70lb. It is, of course, simpler to work with bodies as the unit, and I think the way is to keep placing brood boxes underneath, and taking them away from the top as they are filled.—G. G. Desmond, Sheepscombe, Stroud, Gloucestershire.

THE BRITISH BAR-FRAME HIVE.

Whilst the bee-keepers are reaching towards a victorious rally against the "Isle of Wight" disease, I think some time can be well spent in surveying the position of British bee-keeping, particularly with regard to prospective trading facilities after the war.

Such an examination should amongst other matters bring under review the British bar-frame hive, not only in its capacity to meet home requirements, but also the requirements of the British Colonies, the Allied and all countries.

Assuming that special trade facilities are granted after the war for hives and appliances, how will we stand in competition with, e.g., the American hive

makers? Unless radical alteration in construction of hives is made the home country will, I believe, be unable to take its proper position in the bee-keeping industry of the British Empire, and also unable to compete with success in foreign countries, however friendly may be their offers of trade facilities.

We are hopelessly handicapped, commercially speaking, by unnecessary furnishings such as the following :—

Double walls.
Cleats at the junction of parts.
Porches.
The 17-in. top bar.

I will endeavour to deal with these in the order named :—

Double Walls.—I will not discuss the theoretical question of the merits of double versus single-walled hives. Look at the facts : In the North American Continent, where bee-keeping is carried on with great success over a wide variety of climates, the single-wall hive is all but universally in use.

Cleats.—The principal hive makers in U.S.A. long ago discarded cleats, on the ground of the extra expense. Having used hives for many years, with cleats and without cleats, I can confidently say that cleats are unnecessary (if the hive is properly made), and also that the life of a hive is shortened by the lodgment of water between the cleat and the hive wall. The cleat hinders manipulation of hives.

Porches.—The porch is a " fancy " idea. It does not increase the profit of bee-keeping. It hinders manipulation and rots the body wall by lodging water.

The 17-in. Top Bar.—I have to give high praise to the standard frame. We have got a frame that will suit bee-keepers the world over. It is just right in size and easy to handle. Its greatest competitor, the " Langstroth," is too big, and the evidence of this is the large number of American bee-keepers who prefer the 8-frame Langstroth hive, which approximates in comb area to our 10-frame hive, and other efforts towards a smaller hive made in recent years by American hive manufacturers, notably the " Danzenbaker " hive, the ten frames of which though two inches shallower than our standard, approximate to the comb area of ten British standard frames.

I admit that the additional length of the standard bar makes comb handling easier, especially for novices who are nervous of bees running over their fingers. Necessarily this luxury must be parted with in the construction of a single-wall hive.

Most hives in the North of England are single-wall. Very often merely thickened in the end walls to take the 17-in. bar : a case of the tail wagging the dog. Mr. J. M. Balmbra, of Alnwick, threw over many years ago the 17-in. bar, and supplied a wide circle of bee-keepers residing in perhaps the coldest part of England with a satisfactory single-walled hive.

In conclusion (letting alone the luxurious double-wall hive that is making, I believe, a parochial affair of the British hive-making industry), I would suggest that some effort be made to standardise a commercial single-wall hive which would enable our manufacturers to produce a hive to hold the home market, and successfully compete with makers in all lands where the tariff would give a sporting chance. Our bee-experts would then have greater opportunities; they would be both able and willing to follow the hive to other lands as pioneers of up-to-date bee-keeping, and also engage the hive and appliance trade in a world expansion of the British bee-keeping industry.—J. N. KIDD, Stocksfield-on-Tyne.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

IS " ISLE OF WIGHT " DISEASE CURABLE?

[9360] Do bees recover from " Isle of Wight " disease? your correspondent, Mr. Davis, asks [9350, p. 320] : Why shouldn't they? And why should that question require to be asked after the disease has been ravaging the country during the last ten years? If half-a-dozen bee-keepers had set out under medical supervision, or without it, each using a different preparation, noting the results, and when one preparation failed trying another, ere this the disease would have been banished from the land, and such a question would not need to be asked.

The disease did not appear in this country so recently as ten years ago. Between the years 1877 and 1881 my father, who was a bee-keeper of no mean ability in his day, could not keep his bees alive—every winter or spring they died

out; and I remember him coming in, almost in tears, from the garden one cold spring evening, and telling us that the bees had been out flying, and, being caught in the cold wind, they were lying dead in hundreds. I was not interested enough in bees in those days to give a look at them, but those stocks died in a few weeks, and in the long run he tried new hives, and they then lived and prospered. In all my experience I have never found the bees dying with the cold in that way unless there is something wrong with them.

My experience with the disease began seven years ago, and except 1914, when I had no bees, I have been up against it, trying all the time to find a remedy. I think I have tried every preparation that has been offered to the bee-keeping world, with the exception of Bacterol and Dioxogen. What they are worth as a remedy I don't know, but I hope they will prove during the winter, which is the supreme test, what they were during the summer. Of the others, some were not worth the postage sending for them; only one of the advertised remedies I used was of any use, but even it did not cure. I tried several experiments of my own, and then it was botanical preparations I used. I am a firm believer in their efficiency. I gave you my reason, Mr. Editor, for the faith I have in me, when I spent a very pleasant hour in your office fully three years ago, and I judged what I had found good for me would not be bad for the bees. The first thing I tried seriously was in the spring of 1910. I had two stocks left out of fourteen; one was showing signs of disease, and I gave it a few weeks' treatment; it recovered, and I had about 40lb. of honey from it. In September of that year it showed the old symptoms, and although fed with medicated syrup it was dead by the end of October. That finished my experiment with that preparation.

The year 1911 was such a good one that the disease did not show itself until well on in the winter, and, like many others, I thought we were clear. 1912, however, told another tale, and all that summer I was trying one or another of the many remedies that were then advertised, but without success, and I resolved to burn the lot. I put twelve stocks down, but overlooked a nucleus which was standing in a corner.

It came through the winter, and built up into a strong stock without any assistance in the shape of feeding. I split it into four, giving each lot a young queen. They built up into fairly strong stocks, but in the early autumn they began to show the same old trouble. I again tried a botanical preparation, and got it specially prepared for them, but with most disastrous results. One of the stocks lasted about a month, and all were dead before the spring. 1914 found me without any bees. After burning out all the hives, and cleaning the ground, I determined to wait for a year. In the spring of 1915, owing to illness which required a slight operation for recovery, I was unable to restart, but one day while I was recovering, a friend, who had two healthy stocks, came to me, and asked if I would help him to hive two swarms which had been sent him that day. I did, and when I was hiving the first one I told him the bees had "Isle of Wight" disease. I gave him my reason for saying so, but he could see nothing wrong. "Well," I said, "time will tell, but by the end of August the garden will be well covered with crawling bees." I watched those bees all summer. I still held to my belief, and in August a few crawlers began to appear. My friend was hard to convince, so one evening I gathered a few, and sent them to the Editors. I got word back in a few days that it was "Isle of Wight" disease, and my friend asked me what he should do. I advised him to try Pressey's cure, which he did. One of the stocks liked it and a little formalin, which I put into some diseased cells (there was also foul brood), so well, that it left and joined up to the stock next to it. There were also two casts that came off after the swarms. I treated them also, as they had the same trouble, the other stocks, however, set about robbing them; one they finished off entirely, the other I shifted out of their reach. I attended to the feeding of it, and into every 4lb. of sugar I put a quantity of an indigestion mixture, and a small quantity of capsicum. It quickly took down 28lb. of sugar, and I then fixed it up for the winter. Early in November it was working hard on the ivy, carrying in pollen and honey. I had a look at it in January, and once or twice during the early spring, when it appeared all right.

The first fine Sunday in April I again had a look at it, and had it been May I would have been pleased if it had looked as well. It had no assistance in the spring, but by the end of May it was on twenty combs, and storing honey rapidly. The other stocks I had treated with Pressey's remedy came through the winter, and in the month of April I was asked to look at them. The one that I detected the disease in was in such a condition that I got the gardener to dig a hole, in which I buried it. The other two appeared all right, but shortly after the old trouble appeared. I again treated them with Pressey's remedy, but they did little good all summer, and about a month ago they were destroyed. In the meantime the stock I had was doing well, there was no appearance of disease, but I wanted to be

sure, so after I removed the last of the season's crop, which off that hive amounted to 70lb., I sent a few bees to the Editors. The reply was: "Slightly affected with 'Isle of Wight' disease." In the meantime I had been feeding up all my stocks, for I had made a start on my own again this spring, and as a precautionary measure medicating the food. I bought two preparations; one I had used last year, and another I asked my botanist friend, Mr. Taylor, member of the British Medical Botanists' Association of Great Britain, what its medical properties were, and I wrote down his answer, which was: "Removes all inflammatory and catarrhal conditions, adding tone and power to the bowels, adding power to the excretory orgaus, and correcting all secretions." I thought that should about meet the bill, and I fed my bees, adding one teaspoonful of the mixture to every pound of sugar. After feeding up the slightly diseased stock I again sent a few bees to the Editors, and they failed to find anything wrong with them. I have every confidence in their diagnosis, and I also think I will be able to keep bees now without burning out my hives and buying fresh bees. The hives, however, will be burnt out; it is the best way to clean them.—JAMES C. ARMSTRONG.

PRESS CUTTINGS.

A VISIT TO AN APIARY.

BEE-KEEPING AT GLASSEL HOUSE.

On Saturday last, at the invitation of Mr. A. H. E. Wood, of Glassel House, a number of bee-keepers from Echt and neighbourhood visited this beautiful country seat, which has undergone some transformation since the present owner came into possession about a year ago. Apart from the addition to the dwelling itself and other amenities of the situation, the point of present interest is the apiary. Mr. Wood is chairman of the Aberdeenshire and District Bee-Keepers' Association. This society is affiliated with the British Bee-Keepers' Association, and has as its president the Marquis of Aberdeen, numbering among its vice-presidents local nobility and gentry. Into bee culture Mr. Wood has thrown himself with rare enthusiasm, both as to study and practice. The sloping lawn in front of his house is dotted with numerous bar-frame hives of the W.B.C. order, having a glass sheet over the frame tops, that again overlaid by a warm pad several inches deep, and holed in the centre, like the glass beneath it, for bee-feeding purposes. The hives stand in couples, partly to facilitate artificial swarming, and are ingeniously wired together to a frame stand against the upsetting mishaps of wild weather. On the premises are rooms furnished with all the up-to-date appliances fitted to produce and prepare for market, wax and honey, whether the outcome of clover, lime tree, or heather. Through all the process of machinery requisite Mr. Wood conducted his visitors, meeting at various points friendly criticism in the true scientific spirit, and showing himself a master in the art. One question of burning interest to all was the devastating "Isle of Wight" disease, but absolute certainty about either cause or cure, it was agreed, has not yet been reached, though hopeful experiments are being made. Not least interesting was the observatory hive, where various operations in the busy insect's life can be seen through a glass cover. But apiarianism is not Mr. Wood's only hobby. He is equally at home and successful in the industry of poultry rearing, and the extent of ground and shelter devoted to it is witness to the hold it has upon his personal supervision, supported as that is in both fields of enterprise by his admirable assistant, Miss N. M. Robinson. This interesting round of natural history was followed by the host's generous hospitality, and at the close Rev. Mr. Innes, Greentree Lodge, Echt, voiced the company's gratification and gratitude for their enjoyable outing, a compliment which Mr. Wood suitably acknowledged.—From the *Aberdeen Free Press.*

THE BEE AND THE NECTAR.

A TEMPERANCE STORY.

The following lines were composed by a wounded soldier during a sleepless night in an English hospital:—

It happened once within the bounds of
England's fair domain,
In the county town of Leicester and the shire
which bears its name.
In the Northern General Hospital, 5th
R.A.M.C., T.,
This incident befel a nurse, its reason soon
you'll see.

She was feeling rather weary after a tiresome
day,
And as summer twilight deepened with the
sun's declining ray
Came out into the garden, rich with many a
starry flower,
All sending forth their odours, made delicious by the hour.

Right truly was it written by Earth's wisest
son of old,
Drink not of wine, though held it be, in
cups of virgin gold,
And lendeth to them colour, e'en mixed wine
from thee fling,
For within it lies the serpent, with its deadly
poisoned sting.

Now this rule applies to insects as truly as
to men,
Though the wine they sip be nectar from
the flowers on bank or fen.

Not the poisonous man-made mixtures, with deadly peril fraught,
Which has ruined many a good man and his prospects brought to naught.

It chanced this summer evening that a bee, when homeward bent,
Well laden with rich pollen, was attracted by the scent
Of the flowers in the garden, where the nurse enjoyed the pleasures
Of odours sweet, the wind discreet, and song-birds' joyful measures.

He tarried sipping nectar from the flowers' living hearts,
Till the time he had forgotten, and he dozed in fits and starts;
Hive, work, all else forgotten, save the luring drink he sipped,
Till the nurse in passing touched the flower and threw him from the lip.

His drunken ardour roused by this, he flew to the attack,
She was walking very slowly with one hand behind her back;
He alighted on her finger, thrust with a venomed sting,
And then, attempting to escape, fell down and broke his wing.

The nurse, unconscious of the cause, jumped with the sudden pain,
And stepped upon the insect who would never sting again.
Who justly paid the penalty for lingering and drinking,
And attacking harmless persons just for the want of thinking.

The moral is, avoid strong drink, for therein lay the fall
Of the foolish bee, though certainly by far the worst of all,
The blameless nurse must suffer and endure the burning pain,
The innocent for guilty, drink's golden rule again.

SAPPER V. G. ANNETT, R.E.

From the *Wiltshire Times*.

THE "ISLE OF WIGHT" DISEASE OF BEES.

Last year the hopes of bee-keepers were rising in regard to the disappearance of *Microsporidiosis*, the so-called "Isle of Wight" disease of bees; but unfortunately these hopes have not been realised, as the trouble is again prevalent in many counties.

It will be wise, therefore, to recall the nature of the disease and the best means of combating it, though it must clearly be understood that no certain means of curing it has yet been found. Various remedies are advertised as specifics, and it is well known that the Board of Agriculture are sparing no efforts to find a satisfactory method of dealing with the trouble; in fact, it is reported that definite experiments to effect a cure are now being carried out.

Since the subject was last dealt with in the *Bazaar*, much information has come to light in regard to the cause and symptoms of the disease, the ways in which it is spread, as well as the best method of treatment and prevention. The disease is caused by a parasite called *Nosema apis*, which is found in the alimentary tract of the bee, more especially in the chyle stomach and intestine. Unfortunately numbers of bees can be affected with the disease yet live for a long time, thus spreading it as "parasite carriers," just as at times a person can suffer from an exceedingly mild type of a contagious malady and yet give the disease to someone else, in whom it will assume a virulent character.

The symptoms of *Microsporidiosis* are frequently quite easily observed, though sometimes they are so slight that the trouble is diagnosed as spring dwindling, dysentery, or even simply as a case of starvation. The first symptom that usually catches the eye of the bee-keeper is the fact that numbers of bees are crawling about the ground and are unable to fly. The sight is familiar to those who have had much experience with the disease. The affected bees will congregate in little clusters on weeds or on blades of grass about the hives, though often solitary bees are to be found. There is a difference between such bees and those which have been chilled by cold winds in early spring, because, whereas the latter can hardly move, as a rule, those affected with the parasite *Nosema apis* can usually crawl about or work their wings, unless chilled by long exposure on the ground.

The next symptom which will attract the eye of a careful observer is the dislocation of wings, one or other sticking up in an abnormal position. A further symptom is the distended abdomen, caused no doubt through the inability to fly, as the bee voids its excrement when on the wing. On pressing the abdomen there will exude an abundance of yellowish brown fœcal matter. At times the combs are soiled with the evacuations.

A curious fact that must be borne in mind is that a strong swarm can be affected with this disease. The writer had the trouble introduced into his apiary a few years ago by a strong stray swarm, which developed the malady badly within a week after its arrival.

The matter of practical interest to bee-keepers is the course which should be pursued when there is unmistakable evidence of the presence of the disease. If there are other colonies in the apiary it is certainly the best course to destroy the affected one without delay, to bury the bees, and to water round about the hive with a

hot solution of Calvert's No. 5 carbolic acid and water—2 oz. of acid to a pint of water.

The combs should be melted up for the wax, the frames and quilts destroyed, the W.B.C. metal ends boiled, and the hive scrubbed out with hot soapy water in which a little soda has been dissolved. When dry the hive should be disinfected with a solution of carbolic acid—one part of Calvert's No. 5 acid to three or four parts of water—taking care that it does not splash into the eyes or touch the hands.

To prevent the inroad of disease, hives must be kept clean and dry, the combs should have sufficient warm, dry coverings over them, and ample stores must be available. Old queens ought not to be tolerated, as the object to be aimed at is to have all colonies strong and in as hygienic a state as possible.

Clean water ought to be provided in a sunny position in the spring, when water is greatly needed, in order that the bees may not be compelled to go to stagnant water and to sinks for their supply.

Great care should be exercised in purchasing bees, and they must never be obtained from an infected district. However urgently bees may be needed to strengthen colonies it would be unwise to purchase them from an unknown dealer. This applies both to swarms and to driven bees, since bees may appear to be healthy and yet be parasite carriers, thus bringing the disease to an apiary.

Although the trouble is caused by *Nosema apis*, it must be recollected that the bees may be more susceptible to the development of the organism as a result of unhealthy hives, unsuitable food, failing queens, and careless treatment. Healthy surroundings and management will serve to keep the bees in good condition, and thus help them to resist the inroad of *Microsporidiosis* and other diseases.

If it is desired to keep a colony which is apparently suffering mildly from the trouble, the bees should be confined to as few combs as they can cover, the wraps be kept dry, and, if the weather is fine, slow feeding should be adopted in order to keep the queen laying. The entrance ought to be a small one, so that robbing by other stocks may not take place.

A subject which should be considered by those who can devote time and attention to the matter is the raising of queens from stocks that have remained unaffected in apiaries where other colonies have succumbed, for in this way there is reasonable hope of raising bees which will prove more or less immune to the disease.—J. B. L.—From the *Bazaar, Exchange and Mart.*

Notices to Correspondents

Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. All questions must be accompanied by the sender's name and address, not necessarily for publication, but as a guarantee of good faith. There is no fee for answering questions.

SENEX (Yarmouth).—(1) Yes; you will find devices listed in the catalogues of appliance dealers. (2) Probably a queen could get through unless she was a very large one. Whether she would try is doubtful. If she did go through she might be injured in the process. (3) You may use two sets of shallow combs. There is a disadvantage when examining, as the top box must be lifted off, and stood on one side when it is necessary to examine the bottom combs.

J. R. FLOWER (Winchester).—We advise you not to try the system.

"VERACITY" (Wexford).—The season is too far advanced to treat them now. Put Naphthaline and Apicure in the hives, and if you give candy medicate it with Naphthol Beta. As soon as you can examine them in the spring and ascertain their condition do so, and write us again.

Suspected Disease.

T. A. EAGLES (Devon).—The bees are suffering from "Isle of Wight" disease.

H. W. BURKE (Norfolk).—We should say the stocks have been robbed. Note the condition of the combs. If there is no food, and the edges of the cells are rough and ragged, robbers have been busy.

Special Prepaid Advertisements

Two Words One Penny, minimum Sixpence.

Will advertisers please read these Rules carefully in order to save trouble, as they will in future be strictly adhered to.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not permissible at above rate, but will be inserted at* 1d. *per word as* "**Business**" *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of* 3s. *per* ¼*in., or* 5s. *per inch.*

PRIVATE ADVERTISEMENTS are only intended for readers having **Surplus Stock** *to dispose of.* **Driven bees, Nuclei,** *and* **Queens that are reared or imported for sale,** *are Trade Advertisements, and can only be accepted under trade terms.*

Advertisements must reach us NOT LATER than FIRST POST on TUESDAY MORNING for insertion in the "Journal" the same week.

Orders for three or more consecutive insertions in "The Bee Journal" entitle advertisers to one insertion in "The Bee-Keepers' Record" free of charge.

PRIVATE ADVERTISEMENTS.

HONEY EXTRACTOR, 10s.; Jones' hand sewing machine, 10s.; also treadle, Wheeler & Wilson, both slight disorder, £1; Cubit C clarinet, £2 10s.—COX, 116, Addison-road, King's Heath. v 68

INCANTO acetylene generator, for lantern, 20s.; in good order.—"DYNAMO," "BRITISH BEE JOURNAL" Office, 23, Bedford-street, Strand, W.C.

BY APPOINTMENT.

IZAL

The Modern High-Power Germicide is a reliable remedy against Foul Brood and Isle of Wight disease.

From the B.B.J., July 22, 1915.

IZAL AND "ISLE OF WIGHT" DISEASE.

"I had lost twenty stocks when I tried Izal with my remaining three stocks which were very badly affected . . . The bees are now in very good condition, due solely to the use of this disinfectant."

Sold Everywhere in Bottles, 6d. and 1/- each.

Ask for full details of IZAL Treatment, sent post free by—

NEWTON, CHAMBERS & Co., Ltd., THORNCLIFFE, Nr. Sheffield.

WANTED, a few cwt. light honey, candied or clear, moderate price.—ALBERT BURGOYNE, Lyonshall, Kington, Herefordshire. v 65

HONEY AND WAX.—Wanted, British honey and wax in bulk; any quantity; state price.—MORGAN W. JAMES & CO., Wholesale Chemists, Tudor-street, Cardiff. v 66

FOR SALE now, or can be bespoken for next spring, several strong healthy stocks of bees in straw hives, each complete with 1in. elm floor board and stand; black bees, with some Carniolian blood; splendid honey gatherers and quiet; price 20s. each.—WHITESIDE, Kilham, Great Driffield. v 60

WANTED, for educational purposes, piece of comb containing foul brood.—BRITISH BEE JOURNAL Office, 23, Bedford-street, Strand, London, W.C.

FOR SALE, by W. HERROD-HEMPSALL, Old Bedford-road, Luton, Ariel 3½ h.p. Motor Cycle and Side Car, in perfect condition; any trial or expert examination allowed; spares, belt, in leather case, two tubes, one cover, valve spring, back axle; all wheels fitted with Peter Union bands, back to saddle, horn, speedometer, three acetylene lamps, special luggage carrier on side car to carry two gallon can of petrol and one quart oil can, in addition to luggage, kick start, three speeds. Ridden by above, to be sold on account of medical advice; price £70.

TEN strong hives, zinc roofs, 5s. each; thirty section racks, 1s. 3d. each; fifty feeding bottles, with stages, 1s. each; fifty queen excluder zincs, 1s. each.—X. Y. Z., "BEE JOURNAL," 23, Bedford-street, W.C.

WANTED, good Spaniel, for working thick cover, must retrieve well. Would find home for one duration of war, or purchase. Black Cocker preferred but not essential.—HERROD-HEMPSALL, Apiary, Luton, Beds. v 49

BUSINESS ADVERTISEMENTS.

COMFORTABLE APARTMENTS for Brother Bee-keepers visiting Douglas. Terms: Tea, bed, and breakfast, 3s. 6d.; or full board, 5s. per day.—HORSLEY'S, Merridale House, top of Castle Drive, Douglas, Isle of Man.

WELSH HONEY for sale, about 300lbs. in screw-top bottles; also about 250 in bulk.—T. JAMES, Brynafon, Newcastle Emlyn. v 67

WANTED, English honey, also sections.—Price and samples to JOHN E. KNIGHT & SON, Wolverhampton. v 64

ROWE,

28a, Moy Road, CARDIFF,

SELLS Pure Honeys, Colonial and Californian, &c., carriage paid, tins free; cash. Samples 3d. BUYS Home-produced **Run Honey, Sections,** and Beeswax.

IF YOU WANT GOODS QUICK, SEND TO BURTT,

Bee Appliance Manufacturer, GLOUCESTER.

Have you seen my new Catalogue? If not, you should. Send for it NOW.

BRITISH BEE-KEEPERS' ASSOCIATION.

The Council of the British Bee-Keepers' Association are anxious to obtain gifts of honey for the wounded soldiers in the London Hospital, where it is urgently needed both for food and medicinal purposes. They will, therefore, be grateful for gifts of same, no matter how small, from bee-keepers throughout the British Islands. It is unnecessary to explain our obligations to these brave fellows, who have sacrificed health and limbs for the sake of our country. Gifts should be sent addressed to the Secretary, B.B.K.A., 23, Bedford Street, Strand. The donors' names will be published in the "B.B.J." and RECORD.

W. HERROD-HEMPSALL,
Secretary.

HONEY FOR THE LONDON HOSPITAL.

Amount already received ... 288½ lbs.

EXPERIMENTS WITH "ISLE OF WIGHT" DISEASE.

By J. Price.

Seeing that some of the correspondents in the BRITISH BEE JOURNAL still retain the idea that "Isle of Wight" disease can be contracted and developed in a few days or weeks, and assuming that a lot of bee-keepers still hold this view, I decided to carry out a test this summer which would prove beyond doubt that this is an error.

I had on hand a stock of brood combs on which the bees had previously died of "Isle of Wight" disease. Some were badly stained with excreta, others being quite clean, while the majority of them contained honey of the previous year.

On to these combs I decided to put swarms, and procured five, four of blacks and one of Italians, the first being hived on July 3, the others a few days later. Nothing at all has been done to them; they have been left entirely to themselves, and have managed to secure an abundance of stores for wintering.

Now, assuming that the theory of a short incubation period is correct, at least one of these stocks should have shown the disease before now, for, apart from being supplied with infected combs and contaminated honey, the Italians made a raid on and plundered a neighbour's two hives of the stores left by his bees when they died of the disease last spring. I watched them at work in the rain during early August, and yet these bees are as vigorous as any. For nearly four months I have watched in vain for signs of the disease; to-day in a cold strong wind they are flying freely, and not a single bee misses the alighting board.

Now what can we learn from this experiment? Some one may suggest that it probably proves that the combs and stores were not infected; others may say that the bees show signs of immunity, while a third party may imply that the proper conditions necessary for the development of the disease have not existed.

To all these suppositions I can only say that I have great doubts, although I am prepared to admit that under certain conditions bees do apparently keep the disease in abeyance for a long time. However, to discuss these conditions is not the subject of the present article. I think it has proved conclusively what I said in my letter last winter—that it takes at least four months for the disease to develop, and it may be twelve or even eighteen months after the infection takes place before we see the crawlers very numerous.

It has also proved a far more important matter which will benefit bee-keepers in combating the disease. Here we have at least four months' grace in which to apply remedies before our bees fall sick. This is a matter of great importance, of which full advantage should be taken.

I am often surprised at bee-keepers who never think it necessary to treat their bees *unless they are pronounced to be diseased*. At such a time it requires great skill in administering remedies, and quite likely the weather conditions are not favourable to progress.

If all bee-keepers would take advantage of the time when their bees are apparently healthy, and give them some remedy which will help them to throw off the disease before any harm has been done, rather than wait until the disease is apparent, and the bees are so weak that they are unable to stand the strain, we should hear more of bees recovering from attacks and less of failures. It means that all bee-keepers who wish to keep their bees healthy must *always* medicate as a preventive rather than a cure. So far I have great faith in "Bacterol" for this purpose, and certainly "bees like it."

(To be continued.)

RANDOM JOTTINGS.

MISTAKEN IDEAS CONCERNING "ISLE OF WIGHT" DISEASE.

By Charles H. Heap, Reading.

I.

I am confronted with the task of replying to criticisms which fill many pages of the BEE JOURNAL. It is obvious that I cannot deal with them all in the course of an article which I am anxious shall not run to an unduly tedious length, and I can therefore only touch upon a few of the more interesting points, and deal with the remainder in a general way. I wish to say at the outset that I adhere to all I said in the article under the heading of "Random Jottings," especially as some of my critics and would-be critics have been good enough unwittingly to confirm the statements I made respecting the ignorance and credulity of a very large number of bee-keepers. With regard to the short article headed the "Blind Leading the Blind," I wrote it with the deliberate intention of provoking the "castigation" which Mr. Smallwood in his angry article says I deserve—let us say richly deserve. Within the last twelve months the editor has published from correspondents many letters which show that the ideas prevailing among bee-keepers on the subject of "Isle of Wight" disease are chaotic, and I aggressively drew a big blue pencil across these letters in order to arrest attention while I recite a few important facts and bring to notice some considerations arising out of these facts. I chose for attack the letters of the Rev. A. H. Hollis, because, in the first place, he backed up an unproved experiment with scientific jargon, and because in the second he was a man apparently able to take care of himself. I did not, I think, say a word which is not true, and I did not hit below the belt. As a consequence I am not disposed to withdraw a word of what I wrote.

For the moment I will leave Mr. Hollis and give a little attention to Mr. Smallwood, who has written with a bitterness I should be sorry to emulate in this controversy. I do not mind Mr. Smallwood hitting me hard. I can stand it quite well; indeed, so far I have not felt his blows. He has struck out wildly, accusing me of faults which, if they be faults, he also possesses in a high degree. I actually had the audacity to criticise certain ideas and certain ambiguous phraseology used by Mr. Smallwood, a most heinous offence. To this Mr. Smallwood makes no reply: but with the chivalry of Don Quixote he rushes to the rescue of the priest of Beer, with a result which to me is delightfully interesting. With a desire to give a veener of knowledge and an air of authority to his claim to fame as a discoverer in a realm in which the savants of Cambridge are supposed to have failed, the Rev. A. H. Hollis committed himself to this collection of words:—

> "The external action of Dioxogen, when sprayed upon the bees and combs, is that it destroys the bacilli of disease on the bees and combs, and stops its further progress. . . . They brush themselves over with their legs, and so carry the germicide to their underparts. The bees lick off some of the mixture . . . and all internal infectious germs are destroyed. The thick mucus in the air-passages of the bee is broken up and detached and the air-passages cleared. It is this blocking up of the air-passages and the congestion of the stomach of the bee that prevents infected bees from flying, and makes them crawl on the ground, etc."

I have already pointed out that the seat of the disease is the chyle stomach and intestines, and now I would draw particular attention to the "thick mucus in the air passages."

Judged by this passage Mr. Hollis has not made such profitable use as he might of the modestly equipped laboratory, the microscope and the natural history slides of which he so delicately boasts, in the hope, no doubt, that people will think he does really know all about insect anatomy and physiology after all. Anyhow, poor Mr. Smallwood falls head over heels into the muddle, for he writes:—"The article was well thought out and deserved respect." I did not class Mr. Smallwood among the ignorant and credulous, but by giving his support to this nonsense he has managed to classify himself. The "well-thought-out passage" which "deserves respect" is ridiculous from beginning to end; and Mr. Hollis commits the absurdity of drawing an analogy apparently between the large bronchial tubes of a human being and the remarkably minute tracheæ of an insect. Still it has Mr. Smallwood's approval. I hope my perverseness will not make him very much angrier. It is, no doubt, terrible to write thus about one of the "men who have the grit to rise to prominence"; it may even "behove" me "to go to school again, and learn one of the very first lessons in courtesy, namely, due respect to the opinions"—of Mr. Smallwood.

So much for the personal aspect of the controversey, which, however interesting it may be at the moment, is of no real importance. I ventured to assert under "Random Jottings" that no variety of *Apis mellifica* is able to resist the attack of *Nosema apis*. Does Mr. Smallwood contend that Italians, for instance, are capable of ingesting food containing vital spores of *Nosema*, and afterwards remaining healthy? No. All he says is: "I am compelled to admit that the Italian and

Alpine races seem to be the most resistant." Mr. Smallwood's usual vagueness shows itself in this sentence, but if the words mean anything they mean that these varieties of bees cannot actually resist the disease, but that they do not die so quickly as others. Of what value are such bees in getting rid of "Isle of Wight" disease? None. They only serve as its perpetuators and disseminators.

In my next article I shall deal with Dioxogen, and allude to the so-called cures.

(To be continued.)

CORRESPONDENCE.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

THREE SEASONS' EXPERIENCE WITH ITALIANS.

(Continued from page 305.)

[9361] *Climatic Suitability.*—It has been stated in the BRITISH BEE JOURNAL that the best bee for the English climate is the English bee. In a general sense this is beyond dispute, the climate having, I suppose, played an important part in the evolution of the bee. The Italians are more disturbed by our changeable weather than is the native. This also is natural. I can quite understand that they do not show the tendencies in their native climate that they exhibit here.

Swarming—Excessive and Otherwise. The Italians are accused of excessive swarming. What is excessive swarming? Is there such a thing as under-swarming? Where and what is the standard for swarming? The modest efforts of the natives are generally adopted as the standard, but is this reliable? My experience warrants the statement that the said modest efforts are due to disability and not to disinclination. Some correspondents have recently given us some interesting cases of what robust stocks of natives can do in the way of swarming which support this view. It seems to me both natural and beneficial for a healthy stock to give a prime swarm and a cast. If these two swarms are adopted as a standard the natives must be classed as under-swarmers, and the Italians as over-swarmers. Our variable weather is undoubtedly responsible for a good deal of swarming among the Italians. During and following long spells of fine, dry weather there is little or no swarming, but prolonged confinement by bad weather, particularly with the strong stocks, will "upset the show." Extra super-room appears to be of non-effect, as they swarm often with three supers. Excessive swarming spells extra work and anxiety, but there are, of course, compensations for those who desire increase. The swarming impulse, according to some writers, is intensified by the alleged prolificness of the Italian queens.

Queen prolificness or worker longevity?—The Italians work up into large, and often into very large, stocks. This characteristic is invariably attributed to the prolificness of their queens. With all deference to those who advance this view I am sorry to say that I cannot support it. I have often read of the extraordinary work done by the Italian mothers, but with ample opportunities for forming a judgment I must say that there has been none of it here. Their work has been good and consistent, but so far it has fallen short of the standard set by their native predecessors. How, then, are the huge stocks accounted for? My answer, which I give with conviction, and can support with evidence, is longevity of the Italian worker. The trait is important, has far-reaching effects, and explains much that has been written on the vices and virtues of the race. Mr. Desmond's impression (page 313) fits the case exactly. Spring dwindling, that bane of British bee-keeping, is practically eliminated. The Italian stocks which pass through the winter in a normal condition go forward with steady progress, while the native stocks are frequently at a standstill, for the simple reason that the workers which brought them through the winter have disappeared before the stock has got a start. This failing on the part of the native is both unfortunate and unnatural. There is a cause, but a satisfactory explanation as far as I know has not been given. It is here, and here only, where the native falls behind the Italian. Has the native undergone deterioration? Is there any connection between the cause of spring dwindling and the "Isle of Wight" disease? are questions which creep into one's mind when thinking the subject over.

Honey Production. On examining records I find that the average "takes" per stock for natives and Italians are

36lbs. and 74lbs. respectively. Autumn count in both cases. (In the average for the natives the crop for 1912, when the bees were attacked and subsequently destroyed by "Isle of Wight" disease, has not been included.) My largest "takes" from one stock are: Natives, 111lbs. and no swarm; Italians, 205lbs. and one swarm. The swarm was hived on the old stand in a new brood chamber, and with the two supers which were on the stock. The latter was put on a new stand and gave 60lbs. surplus. Both lots swarmed and the swarms were returned.

Robbing.—This is a vice prominently associated with the Italians, but, as we have had no trouble in this direction, may I suggest in those cases where it has occurred that the management has been at fault? The natives are adepts at robbing if opportunities are put in their way. Much depends upon management.

Temper.—So long as the Italians are kept pure there does not appear to be any difference in temper as compared with the natives, but the hybrids are bad tempered and difficult to manage. The Dutch-Italian hybrids referred to in my previous letter were demons. They took possession of the place and destruction was the only course.

Management. — Resourcefulness is a valuable asset to the bee-keeper in dealing with Italians. The large amount of swarming and the huge size of the swarms which issue from stocks heavily supered create some puzzling situations. They are much addicted to building brace-comb, and to reduce this to a minimum ample super room should be provided. They also have a habit, which I have not noticed with the natives, of starting queen cells *after* the swarm has left. For this reason, when it is intended to return the swarm, this operation, together with that of removal of queen cells, are better left until the evening of the second day. Novices, in the absence of experienced help and advice, are advised to keep to the natives. —W. H. WHITE, Harlington, Beds.

HEALTHY HIVES AND PREVENTION OF "ISLE OF WIGHT" DISEASE.

[9362] In reading the BRITISH BEE JOURNAL it is extremely interesting to note the increasing number of "cures" for "Isle of Wight" disease. The strange thing is that I hardly ever see any mention of Herrod's Apicure as a means of prevention. Since 1912 this district has been swept of bees almost, but in the last two or three years I have not only been able to keep bees myself, but gradually, directly and indirectly, to restock my neighbours. It is true that a good deal of this success against disease is due to an excellent strain of bees obtained from Mr. Simmons; but I attribute at least as much to the help of Apicure as a disinfectant protection. Wherever three tablets of Apicure are kept on the floor-board of the hive continually, winter and summer, there the bees are safe, according to my experience. I do not know Mr. Herrod, but I know his Apicure, and I recommend it for the good of the bees.—G. D. C., Lower Beeding.

QUEENS ON ALIGHTING BOARD.

[9363] In the BRITISH BEE JOURNAL for October 12 [9352, page 321] "Queen Bee on Alighting Board." I have seen similar cases many a time. It takes place through the bees being confined to their hives for some time by bad weather, then on the first fine warm day that comes, they rush out as if swarming, and during this excitement the queen leaves the hive with the bees for an airing, and sometimes gets lost. In the BRITISH BEE JOURNAL for 1901, page 473, I gave some of my experiences of queens leaving the hive.

I am glad to say that we had one of the best honey seasons this year, especially on the clover. It is grand honey. All through my long experience I have never seen such light honey coming in so late as the first week in August. The honey season began on July 10, and continued till August 14, then we had a break in the weather, when the heather was in full bloom, therefore, the harvest from the heather was poor.

I may mention one swarm in particular, which is my record for a July swarm (and a proof that the old adage is far out of it). This was hived on July 6, weighing 6lbs. 10ozs., and from it I have taken 117lbs. from clover, and 41lbs. heather. Total, 158lbs., leaving enough food for wintering. I had another swarm on July 14, weighing 6lbs., from which I have taken 100lbs. of honey.—JOHN BERRY.

QUEENS PASSING THROUGH EXCLUDERS.

[9364] In reply to a letter from Mr. F. M. Claridge (9340, page 306), I should like just to say that I do not complain of the wire excluders simply for the sake of doing so. The excluders as they arrived from the manufacturers were very far from true, and, as I like them if they would only keep the queen back, I rather hoped that something might be done to alter them in future.

As to the suggestion that the reason my queens get through is that they are

small, that strikes me as being a rather childish way of arguing the matter. As a matter of fact, Mr. Claridge's letter seems to me to show that his own are none too good. It is true that the nucleus did very well, but nothing very extraordinary for an early nucleus, and his suggestion to me to extract outside combs, or *even* put an extra brood chamber below, seems to me to show he has a rather small idea of a prolific queen; also I may point out that it is the best queen that is the most likely to get through the excluder.

The queens I mentioned were some rather fine specimens of Mr. Simmons' White Star bees. I usually have the queen breeding in 20-24 16 in. by 10 in. frames, and often in more.

I hope Mr. Wilkes will try to make some alteration in the excluders—the principal fault is the softness of the wires.

I seldom use excluders except in transferring from one lot of combs to another, in removing combs, or transferring from boxes.

I think also a cross piece should be placed every 1½ins. at the most.

Bees all round this district seem quite healthy at present. I have heard of no case of disease this year, though a few years ago all, or almost all, the bees were wiped out.—Robt. B. Manley.

A METHOD OF DESTROYING WASP NESTS.

[9365] I succeeded in destroying several wasp nests in (to me) a new way this summer.

I had no tar or cyanide at hand. I loosely stopped the entrance with a handful of dry grass. Though this I poured about a quarter of a pint of petrol and half a pint of paraffin oil.

From a distance, with the aid of a flame on a long rake handle, I lighted the grass in the entrance. In about two minutes there was a slight explosive puff. I had no further trouble with those nests. —Senex.

THE BRITISH BAR-FRAME HIVE AND COMMERCIAL BEE-KEEPING.

[9366] The article in the issue of the Journal for October 26 on the "British Hive," by Mr. J. N. Kidd, is about the best thing I have seen for a long time. British bee-keepers have been among the most painstaking and thorough in their study of bees and bee-keeping from a scientific point of view, but when it comes to bee-keeping from a commercial standpoint they are hopelessly in the background. The British hive, with its fanciful porches and unnecessary superfluities —as ably demonstrated by Mr. Kidd in his article—is entirely out of date. Our hives have answered hitherto for the scientific bee-keeper, and let it not be thought that I am disparaging his work, far from it. The question before us to-day is commercial enterprise after the war, but we shall get "left," if we are not so already, in commercial bee-keeping, as distinct from the scientific and amateur side, unless we adopt the up-to-date and business-like methods of our enterprising Colonial and American friends—and competitors.

It is hardly to be expected that the British hive makers will get out of the old ruts they are in without a struggle, and it is a wonder they do not provide mats for the bees to wipe their feet on under the porches of their elaborate hives. Simplicity of construction consistent with efficiency is the key-note of the success of our Colonial and the American hive makers. Bee-keepers, read Mr. Kidd's article again on pages 334 and 335, and let us all remember that there is another way of beating our enemies besides armed force, viz., by using our brains. It would be interesting to know something of German bee-keeping methods, and perhaps some of your correspondents could enlighten us.—Ernest Simons, Erdington, Birmingham.

PRESS CUTTINGS.

ABOUT BEES.

I quoted to my old beekeeper friend one day somewhat in this fashion as we stood near his skeps: "The bee-house should face the south, with a turn perhaps to the east; be protected from the north and prevailing winds; not too far from the dwelling, lest the insects become shy of man, nor too near, lest they be interrupted by him. No paths should cross its entrance, no high trees or bushes intercept their homeward flight." He turned the words slowly over in his mind, then "Is that news to you?" he queried. I replied that a beekeeper called Virgil, who lived long ago, had left behind him a deal of wisdom such as the aforementioned. "A bonny-like keeper of bees he would have been if he had placed his skeps any other way," was his next commentary. "I had an auld acquaintance when I was a younger man who could have told Virgil more about bees in an hour than ever he could tell folk in a year. And I never heard the name of Virgil before," he added, with a snap in his speech that made the memory of the ancient Mantuan fade for the present like a snow-wreath in thaw. "The bee-keeper

who doesn't take advantage of a sheltered nook for his skeps is worse than daft, and as for that bittie turn to the east—well, that minds me. There were plenty folk kept bees where I hailed from," the old man proceeded, "but none of them had the touches Willie Beck had. He came out of a race of bee-keepers. For more years than could be counted on your fingers his take of honey was heavier than the ruck round about; and he wared less time and labour on them than any. They watched him at every turn whenever they got the chance, but they were too mim-mouthed to ask him questions, and he was too fond of a splore to tell them his secret. Willie's wife was dead, and he got most of his meals in the house of my uncle. So it was in the ordering of things that when Willie took to what was his death-bed he should be guided in his sickness by my aunt. They had small interest in bees, but one day, just before the end came to Willie, he gifted the few things he had to them, and urged them to keep on his skeps. They'll be easily managed, and worth the pains, says he; but aye keep the skeps turned a bittie to the east—the sun wakes the bees earlier that way."

THEIR CLEVERNESS.

It was a fine April day as I listened to the bee-keeper run on thus. Some of the insects were stirring, and had made journeys in search of stores, many of them dropping upon the landing-boards with the coloured pollen of crocuses adhering to their legs. If you bent your ear close to the top of a skep the faint murmur of the inmates could be heard—a drowsy kind of chant that immediately carried the mind along to June and apple-blossom days and sunshine. The hive bee is a wonderful atom: indeed, all things to be met with outside are wonderful. But then the hive bee can perform such a host of clever things!

"Creatures that, by a rule in nature, teach
The art of order to a peopled kingdom."

Not to dwell upon the life of the hive inmates, of which so much can be held up for admiration, one has only to take slight stock of the accomplishments of the individual members of the bee community to realise this to the utmost. From the essences of flowers honey and wax and poison can be produced, and even a kind of gum or varnish. It is possible this sticky substance may be collected from the bark of fir trees or the buds of the horse-chestnut or the leaves of the hollyhock; however it is secured, it plays its part in the make-up of the hive. The combs are gummed to the sides and roof of the skep, crevices are stopped up effectively, for the bees by twinkling their wings can keep the temperature of their abodes at a pitch to suit themselves, and with it the cell-work of the combs is varnished. I have even heard of a dead mouse in the interior of a hive coated over with this varnish, and in decay rendered harmless to the health and comfort of the bees, who like no uncleanness or stench near them. Once a snail gained entry into a hive, and instead of waiting till the slow fellow would take his departure, as he might have done in time, the bees sealed him cunningly round the edge of his shell, thus fixing him to the floor as a living monument of the folly of not attending to his own business.

THEIR HONEY.

"Bees are great travellers," said the old bee-keeper to me after a pause spent in watching the arrival and departure of some of the inmates of the skep. "Mine visit an avenue of lime trees in early summer more than a mile away. I found that out for myself one year when mine were the only skeps hereabout. It was a grand season for lime flowers, and the avenue was thronged with my bees." I told him of a man who kept bees about his garden situated in Holborn, how he was consumed by the desire to know where they foraged, and how he hit upon a novel plan of sprinkling them all with a red powder as they hurried from the hive early in the morning. "That beats Willie Beck," interjected my hearer. "Away the Holborn man hied to Hampstead," I went on, "for he knew that was the likeliest spot in the vicinity, and what was his delight to find on the flowers growing thereabout large numbers of his marked bees. That somewhat beats your mile to the lime avenue!" From foraging we drifted to the flavours of honey. "There is nothing better than heather honey," emphatically said the bee-keeper. I yarned to him about the orange-blossom honey of the Isle of Bourbon, of which it has been said than on opening a bottle of it the room will be filled with its perfume; but the mention of orange-blossom left him cold and unresponsive. I ran over the virtues of the rosemary-flavoured honey of Narbonne, the honey of Malta, and capped the list with the classic and far-famed thyme honey of Mount Hymettus. "A lot of havers," responded my bee-keeper. "I never heard tell of better honey than what comes from the heather moors at the back-end of summer. And neither did you! But I could tell you a funny thing that happened to the honey in the skeps of a man that kept bees not far from me here. He had a great bed of onions in flower for seed in his garden, for he was more of a gardener than a bee-keeper or the like wouldn't have hap-

pened. Well, his bees found out the onion flowers just at their door, searched them nobly day after day as long as they lasted, and when he came to take the comb out it was so harshly tainted with onions that it could neither be sold nor used."

THEIR MANAGEMENT.

It is common fancy about bee-keeping that it can be undertaken with scant knowledge of their habits, but I never pay a visit to my old friend without admiring his skill in their management and the foresight he displays in thinking about their wants. They have many enemies, not only in their foraging haunts, but also about the skeps. Certain kinds of birds waylay the bees as they return laden, and some two years ago my old bee-keeper harboured unwittingly a toad who grew fat on the spoils secured right at the door of one of the skeps. So that he constantly scrutinises the surroundings of the bee-corner lest the like accident should befall him again. "Did you ever have your skeps robbed by other bees?" I asked him, as I watched him shy a stone at a venturesome bird perched provokingly near. "'Deed, no," he answered; "but I have heard tell of it being done. The skep that was plundered belonged to a man that was well up to the business, and it was his misfortune to have a neighbour who would have boggled the keeping of hens far less bees. This bungler," he explained, "had taken every drop of honey from his bees, and, not to be worsted, they tried the same game on themselves. For more than an hour there was a battle-royal between the two skepfuls, and when it was over and done the bodies of hundreds of bees lay around. Preserve me from a neighbour that has little skill of bees," exclaimed the bee-keeper. Then he went indoors to concoct a mixture of treacle and water for such of the inmates of his skeps as were on the move, and when he returned I found with some reluctance that it was time to be going. "Come back in apple-blossom time," said the old bee-keeper in parting, "and you'll see the bees at their best." "May June find you hale," I wished him.—D. B.

From the *Greenock Telegraph*.

A STING AT BOTH ENDS.

The following story comes from Milwaukee :—

"Out of the north woods, where wild things other than animals thrive, comes this tale, vouched for, of course, by a veracious guide : Young men campers who have been trying to 'Burbank' mosquitos by interbreeding them with bees to get a stingless mosquito, got instead a mosquito which bites at both ends."

Mr. Luther Burbank is the famous American plant hybridiser, who is known as "the wizard of horticulture."—From the *Daily Express*.

Notices to Correspondents

Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. All questions must be accompanied by the sender's name and address, not necessarily for publication, but as a guarantee of good faith. There is no fee for answering questions.

* We have received a label which has become detached from the package. The postmark on the label is "Kington." Will our correspondent please repeat query?

"VERACITY" (Wexford).—*Swarms with Young Queens.*—It is usually considered that a stock is not so likely to swarm with a young queen as it is with an old one.

H. B. E. (Sandbach).—*Moving Diseased Stock.*—Move them as far away from the others as possible, if you decide to treat them. We have given all we know in the JOURNAL.

Honey Sample.

"VERACITY" (Wexford).—It is very good, and should rank as first quality clover honey.

Suspected Disease.

J. K. D. (Darlington).—"Isle of Wight" disease is developing.

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Two Words One Penny, minimum Sixpence.

Will advertisers please read these Rules carefully in order to save trouble, as they will in future be strictly adhered to.

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PRIVATE ADVERTISEMENTS are only intended for readers having **Surplus Stock** *to dispose of.* **Driven bees, Nuclei,** *and* **Queens that are reared or imported for sale,** *are Trade Advertisements, and can only be accepted under trade terms.*

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MR. HERROD-HEMPSALL thanks those who kindly wrote offering dogs in reply to his advertisement. The letters are too numerous to reply to individually, therefore will all take this as a reply that he has now obtained what he requires.

FOR SALE, two fine Black Leghorn Cockerels, April hatched, Hunter's strain, 5s. each.—KNIGHT, Kenwyn, Truro. v 72

WANTED, a few Sections of Honey; good price paid.—DOLLIS PARK DAIRY, Church End, Finchley.

BY APPOINTMENT.

IZAL

The Modern High-Power Germicide is a reliable remedy against Foul Brood and Isle of Wight disease.

From the B.B.J., July 22, 1915.

IZAL AND "ISLE OF WIGHT" DISEASE.

"I had lost twenty stocks when I tried Izal with my remaining three stocks which were very badly affected . . . The bees are now in very good condition, due solely to the use of this disinfectant."

Sold Everywhere in Bottles, 6d. and 1/- each.

Ask for full details of IZAL Treatment, sent post free by—

NEWTON, CHAMBERS & Co., Ltd., THORNCLIFFE, Nr. Sheffield.

WANTED, one dozen crates of clean, newly drawn out shallow frame combs wired, some drone and some worker comb.—VINCENT, 132, Croydon-road, Anerley, S.E. v 71

WANTED, hundredweight honey, colour immaterial.—Sample, price to HULBERT, Betton-street, Shrewsbury. v 70

HEATHER HONEY wanted.—State price to H. F. CRUX, The Gardens, Goddington, Chelsfield, Kent. v 69

HONEY, Extracted.—Wanted, two or three cwt.—Address, with sample, quantity, and price, X. Y. Z., BEE JOURNAL Office, Bedford-street, W.C.

INCANTO acetylene generator, for lantern, 20s.; in good order.—"DYNAMO," "BRITISH BEE JOURNAL" Office, 23, Bedford-street, Strand, W.C.

FOR SALE, by W. HERROD-HEMPSALL, Old Bedford-road, Luton, Ariel 3½ h.p. Motor Cycle and Side Car, in perfect condition; any trial or expert examination allowed; spares, belt, in leather case, two tubes, one cover, valve spring, back axle; all wheels fitted with Peter Union bands, back to saddle, horn, speedometer, three acetylene lamps, special luggage carrier on side car to carry two gallon can of petrol and one quart oil can, in addition to luggage. kick start, three speeds. Ridden by above, to be sold on account of medical advice; price £70.

BUSINESS ADVERTISEMENTS.

COMFORTABLE APARTMENTS for Brother Bee-keepers visiting Douglas. Terms: Tea, bed, and breakfast, 3s. 6d.; or full board, 5s. per day.—HORSLEY'S, Merridale House, top of Castle Drive, Douglas, Isle of Man.

WELSH HONEY for sale, about 300lbs. in screw-top bottles; also about 250 in bulk. —T. JAMES, Brynafon, Newcastle Emlyn. v 67

ROWE,

28a, Moy Road, CARDIFF,

SELLS Pure Honeys, Colonial and Californian, &c., carriage paid, tins free; cash. Samples 3d. BUYS Home-produced **Run Honey, Sections, and Beeswax.**

THE

Standard Health Food Co., Reading,

with which is amalgamated

The Berkshire Honey Co.,

are buyers of Honey in Sections, in any quantity. State price and quantity for Cash.

Office 133, FRIAR STREET, READING.

The Pharmaceutical Journal says:—The Standard Health Food Co. are a firm with a world-wide reputation for honey.

Their "Joybells" Honey is a honey of brilliant appearance and good consistence, with the delicate natural flavour, and is guaranteed to be pure honey as extracted from the comb.

IF YOU WANT GOODS QUICK, SEND TO BURTT,

Bee Appliance Manufacturer, GLOUCESTER.

Have you seen my new Catalogue? If not, you should. Send for it NOW.

BRITISH BEE-KEEPERS' ASSOCIATION.

The Council of the British Bee-Keepers' Association are anxious to obtain gifts of honey for the wounded soldiers in the London Hospital, where it is urgently needed both for food and medicinal purposes. They will, therefore, be grateful for gifts of same, no matter how small, from bee-keepers throughout the British Islands. It is unnecessary to explain our obligations to these brave fellows, who have sacrificed health and limbs for the sake of our country. Gifts should be sent addressed to the Secretary, B.B.K.A., 23, Bedford Street, Strand. The donors' names will be published in the "B.B.J." and RECORD.

W. HERROD-HEMPSALL,
Secretary.

HONEY FOR THE LONDON HOSPITAL.

Amount already received ... 288½ lbs.

ROLL OF HONOUR.

The Roll of Honour mentioned in the report of the monthly council meeting of the B.B.K.A. in our issue last week should not be confused with the one published in the "B.B.J." and the RECORD, and the names should be sent to the secretary, B.B.K.A. The feeling of the Council was that as the B.B.K.A. represented bee-keepers generally, the list should be open to all bee-keepers whether members of an association or not, the only qualification being that he has been killed, wounded, or been granted a military decoration such as the V.C., D.C.M., etc.

Our own Roll of Honour for all our readers who have "joined up" is still open.

REVIEW.

Money in Bees in Australasia, by Tarlton-Rayment. (London: Whitcombe and Tombs, 7s. 6d.)—Mr. Tarlton-Rayment has struck out a new line in the arrangement of this book, the work being given under four main headings:—Spring, Summer, Autumn and Winter.

This is followed by a chapter on Australian Honey-plants, a very full list being given, and also their characteristics, honey-flows and sources. Mr. W. Pender in an introduction to the book, referring to this section, says: "No one has previously attempted to compile such a comprehensive tabulation." The book is excellently got up and illustrated, nearly the whole of the illustrations being original drawings by the author.

There is some very useful information, especially in reference to out-apiaries and "honey-houses." Conditions in Australia differ from those obtaining here, and some of the methods and operations described are not applicable to this country.

The recipe for soft candy that is given is the formula of Br. Columban, of Buckfast Abbey, and was originally given in the B.B.J. for September 14, 1905.

Our American friends have, by designating two brood diseases "American" foul brood and "European" foul brood, caused considerable confusion, which Mr. Tarlton-Rayment has rendered more confounded by giving *Bacillus Alvei* as the disease-producing organism in Black Brood, whereas this was the name given by Cheshire and Cheyne to the bacillus found in the virulent, strong smelling type of Foul Brood. It is also stated that brood destroyed by extreme cold and sometimes by heat was at one time confounded with disease, and referred to as "pickled brood." That mistake has never been made in Great Britain, where the former is known as "chilled" and the latter as "scald" brood. "Pickled" or "sour" brood is a different condition altogether, being so designated because the smell resembles that of pickles, or vinegar.

A disease that is not known here is named "D.T." The only ailment [or should it be ale-ment?] that I have known described by those initials affects human beings, and is caused by over-indulgence in "the cup that cheers"—and inebriates. Australian bees have not contracted this habit, and the initials stand for "Disappearing Trick." The bees leave the hive, but do not return, and in five or six days strong colonies have disappeared entirely, or are reduced to a mere handful of bees and the queen.

The title of the last chapter under the heading of "Autumn," will also look strange to bee-keepers here. It is: "A Flow of Honey in the Winter."

The book is well worth reading and studying; to anyone who is likely to move to the Antipodes and there take up bee-farming it is almost a necessity.

It may be obtained from the B.B.J. office, post free, 8s. J. H. H.

"BEE-KEEPING UNDER THE SOUTHERN CROSS."

By Tarlton-Rayment,
Author of "Money in Bees in Australasia."

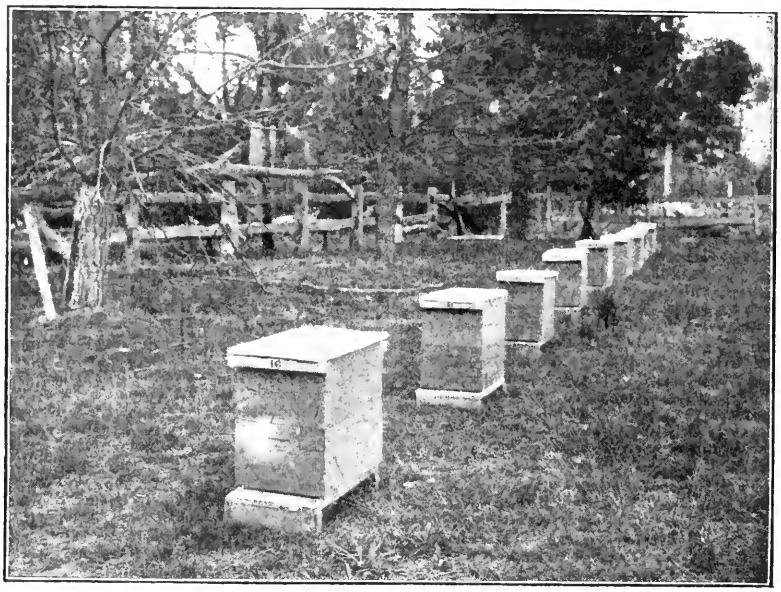
The writer proposes, with the Editor's permission, to detail, in a short series of illustrated articles, the establishment of a commercial bee-farm in one of the vast eucalyptus forests of Australia. [A comprehensive treatment of apiculture and of the unique honey-secreting flora of the great Commonwealth will be found in my work, now obtainable at the office of this paper.]

In the first place, what is the climate like to live in? Well, it ranges all the way from the mild English-like climate of Tasmania up to the tropical heat of Queensland and the northern territory. The eucalyptus forests are ubiquitous; there are large crops of honey waiting to be harvested in all of the States. Mind you, the flows are heavy, and the chief source of supply is the indigenous gum-tree, with the exception of one or two coastal districts, where clover honey is gathered. Inland, there are limited areas yielding good crops from lucerne.

In the State of Victoria a "bee range," comprising 2,000 acres of heavily-wooded land, may be obtained from the Forest Department at a nominal rental. Should the apiarist intend to reside at the apiary, he had better take up a "bee-farm site" close to some creek, billabong or other water. Timber in plenty is at hand, and seven fencing-wires run through 150 bored fence-posts will safely enclose the apiary and dwelling.

About hives. In some States it is illegal to use any but "properly constituted" frame hives; indeed, the eight and ten-frame Langstroth hive, fitted with Hoffman frames, is used almost universally. A very few incline to the Heddon, or "divisible brood-nest" pattern.

In Australia bees may be obtained on combs or without combs. Some make a practice of hunting out and "falling" bee-trees in the bush, and many obtain their first stocks in this way. The vast majority of swarms so captured are of mixed blood, i.e., black and Italian cross-breds. They



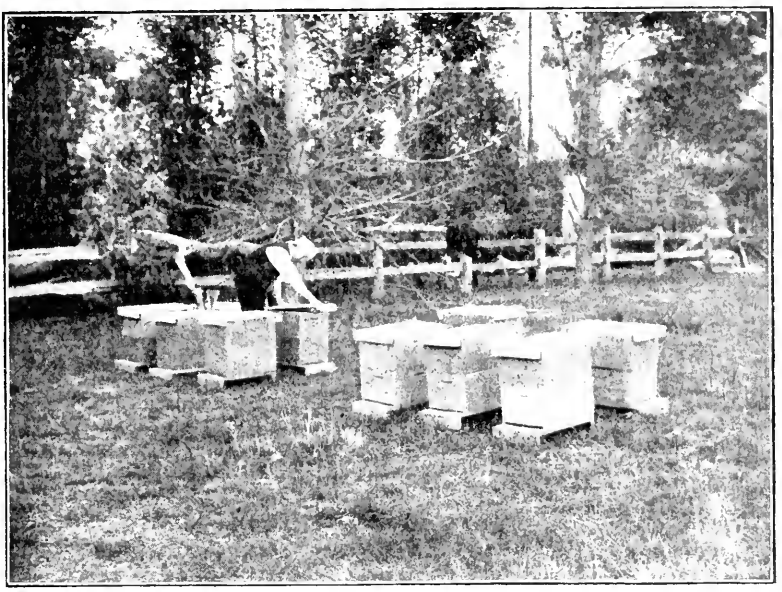
HIVES PLACED IN ROWS.

are all descended from introductions from England and which have intermingled with the Italians from the bee farms. The honey-bee is not indigenous to Australia.

What number of stocks are necessary to furnish a livelihood to the apiarist and his family? The writer is personally in touch with a Victorian who started the season of 1916 with 13 stocks and 3 nuclei; of course he had a large number of surplus combs to draw on. He increased the apiary to 53 full colonies, re-queened the whole with selected Italian mothers that he raised, and wound up by harvesting a crop that realised £100. On the other hand, during a droughty spell 200 hives may not produce a single pound of honey, but only entail considerable outlay on sugar or other feed. Fortunately the latter contingency is not common.

A really skilful apiarist will prosper, for the conditions in Australia are indeed conducive to the welfare of insects in general, and of honey-bees in particular. The writer has had the pleasure of harvesting an average of 360 lbs. per hive in a yard of two hundred or more colonies. Large as this yield appears, it has often been exceeded, in one case by over 100 lbs.

The great majority of Antipodean bee-keepers prefer to place the hives on the ground, and, as white ants are prevalent in most districts, the bottom boards should rest on blocks of red gum or jarrah. Tarring the underneath of the hives is also recommended. The termites do not readily attack the timbers mentioned. The hives



HIVES PLACED IN GROUPS.

are placed in rows, or else in groups. Some apiarists prefer the group of five, known as the Miller plan. Both plans are illustrated in the accompanying photos, which were taken in the writer's apiaries. —TARLTON-RAYMENT, Gippsland, Vic., Aus.

(To be continued.)

CRAYFORD AND DISTRICT BEE-KEEPERS' ASSOCIATION.

REORGANISATION OF BEE-KEEPING IN KENT.

On Saturday, October 28, the Crayford and District Bee-keepers' Association held a conversazione and extraordinary general meeting at St. Paulinus Hall, Crayford, for the purpose of deciding certain proposals recommended by their executive for the reorganisation of the bee-keeping interests in the County of Kent. About sixty members were present.

The President, Mr. A. Dewey, briefly outlined the history of the association since its inception in 1904 as a result of a series of lectures given by the Kent Education Committee. At that time the association consisted of but a handful of enthusiasts in the neighbourhood of Crayford, but under the able guidance of its first president, Mr. E. R. Stoneham, and its hon. secretary, Mr. J. M. Bates, assisted by an enthusiastic council, the association had made progressive strides, until now the membership is nearly 180, covering an area from Peckham to Sittingbourne, and from the Thames to Bromley and Sevenoaks, and it was considered necessary to take such steps as would permit of further expansion, and at the same time it was thought advisable to make an attempt to co-ordinate the work over the county area.

In moving his resolution, Mr. G. W. Judge, the present hon. secretary, stated that the Crayford Association and the Mid-Kent Association were the only two organisations of bee-keepers in the county, and it was the desire of the Council to take such steps as would enable the two associations to work together under a common title, to their mutual advantage and to the advantage of bee-keepers generally in the county.

Mr. H. Watts, the secretary of the Mid-Kent Association, attended. He stated that their attitude was favourable

to the proposal, and he had little hesitation in saying that his Association would be only too pleased to join the Crayford Association to further the movement. At a recent meeting of the Council of the Mid-Kent Association at Maidstone, at which Mr. Judge and Mr. Bryden attended, and outlined the proposed reorganisation, a resolution was passed unanimously recommending amalgamation with the Crayford Association in forming the new Kent Bee-keepers' Association.

In brief, the proposals are to divide the county into three divisions: the Western, Midland, and Eastern Divisions, the Crayford Association to be responsible for the former, the Mid-Kent Association, the Midland Division, and for the time being the Eastern Division would remain unrepresented. Each division would send delegates in proportion to their membership to form the County Executive, and this executive would be responsible for all the higher questions of policy, etc., etc., while the divisions would as at present fulfil their functions by administering to the needs of bee-keepers in their respective districts. The propsals were carried with enthusiasm, with one dissentient. Mr. Stoneham thought that it was premature to take the step under existing conditions, but, as the secretary pointed out in his reply, the proposal did not seem a great upheaval, but was simply designed to create the necessary machinery to enable existing organisations to work together to the advantage of all concerned. It took time to reorganise and by commencing now they would be ready to take more active steps immediately on returning to normal conditions.

Mr. E. D. Till, of Eynsford, vice-president, spoke in favour of the idea. He referred to the efforts he had made more than a decade ago to bring bee-keepers in the county together. It was very gratifying to him that his desire was at last about to be realised. The words "All things come in time to those who know how to wait" appealed to him in his ambition for a Kent County Association with especial significance. The words were recorded by a prisoner on the walls of the Tower of London.

Messrs. A. Dewey (Wilmington), E. D. Till (Eynsford), G. Bryden (Rochester), and G. W. Judge (Dartford) were unanimously appointed delegates to the new executive.

Earlier in the afternoon, Mr. Judge, on behalf of the Committee, reviewed the work of the Re-stocking Scheme, which had just been brought to such a successful conclusion. The Crayford Association was the first in this country to take steps to counter the effects of the so-called "Isle of Wight" disease among bees, by introducing a practical breeding scheme. Ninety per cent. or more of the bees in the district had been destroyed through its ravages a few years ago, and by the successful conclusion of the scheme which Mr. Judge initiated in 1914, and put into effect with the assistance of Mr. Bryden and Mr. Barnes, seventy colonies had been produced and distributed to subscribing members in all parts of the county this season. The scheme had created considerable interest among other associations, so much so that the Leicestershire, Nottinghamshire, Somersetshire and Sussex Bee-keepers' Associations had each asked to be furnished with full details. Thus far the two former had decided to put schemes of a similar character into operation next year. Bees are necessary in the production of home supplies of food, not only of honey, but their usefulness in the fertilisation of fruit is of such importance as to make it imperative not to delay re-stocking.

Following tea, provided so excellently by the lady members of the Social Committee, Mr. G. H. Barnes gave a practical demonstration on the methods of wax extracting, refining and moulding. This demonstration created exceptional interest. A quantity of combs were rendered by a steam extractor, and the wax was strained, clarified and finally moulded. Considerable skill is required if the very best samples are to be obtained suitable for competition on the show bench, especially in the operation of moulding, to prevent cracking the cake due to uneven contraction. Mr. Barnes was heartily thanked for his instructive lecture.

The meeting was brought to a conclusion with votes of thanks to the Social Committee for providing refreshments, and to the other officers responsible for the arrangements.

LEICESTERSHIRE AND RUTLAND BEE-KEEPERS' ASSOCIATION.

A conference of members of the above association was held at the Vaughan College, Leicester, on Saturday, October 21. Mr. A. E. Biggs presided.

Amongst other present were Mr. G. W. Judge, Secretary to the Crayford and District B.K.A.; Mr. George Hayes, Secretary Notts B.K.A.; the veteran bee-keeper of the county, Mr. J. S. Shenton (aged 93 years); also Messrs. H. M. Riley, E. J. Underwood, A. J. Marriott, C. W. Bassant, W. E. Moss, W. B. Tallent, A. Briars, J. Thompson, S. Clark, J. Hunt; a number of ladies and the Secretary.

The subject chosen for discussion was: "How the Association can best help those members who have lost their bees through 'Isle of Wight' disease." This was ably

opened by Mr. W. E. Moss, of Hinckley, who pointed out that it was their duty as an association to help the members. The disease had been prevalent in Leicestershire for the last three or four years, and in some cases took a very virulent form. As a county they were situated in the very heart of the country, and had by no means the worst bee flora. He hoped some scheme might be developed whereby the members who wished could have their apiaries replenished at a nominal cost.

Mr. G. W. Judge explained very fully the co-operative scheme which had been established in his district in Kent. He remarked that the present conditions were very serious from the country's point of view, for bees were extremely valuable from the standpoint of fertilisation, and the keeping of bees could help very largely towards the fruit production of the country. The scheme adopted by the Crayford and District B.K.A. had surpassed their expectations. Their policy had been not to import bees from outside the county, but to breed from those stocks which had proved themselves strong enough to resist the disease. They aimed at supplying stocks at a nominal price, a desire not to make a profit out of the business being a strong factor in their scheme. Members who desired stocks subscribed 10s. each to provide working capital, and in return were supplied with a four-frame nuclei and a young queen in strict rotation. All the work was undertaken voluntarily, and the subscribing members took all responsibility in the event of the apiary at which the nuclei were raised becoming infected.

In summing up the discussion the Chairman said he was sure all present would agree with him that Mr. Judge had given a very clear and lucid explanation of the scheme, and he was very glad to hear that it had worked out so satisfactorily in Kent. We knew very little about the origin of the disease, and a remedy was difficult to find. Bee-keepers were not acting solely in their own interests, but for the general good of the community. There was urgent need for Government action to prevent diseased stocks infecting those which were apparently sound, but at present we could not get help in that direction. He suggested the following resolution, which was unanimously carried: "That this meeting records its opinion that a deputation of influential bee-keepers should wait upon the President of the Board of Agriculture and press upon him the urgency of the need of measures being taken to remove the source of infection." This in his opinion was a necessary preliminary step to any re-stocking scheme which might be adopted.

On the proposition of Mr. Hackett, seconded by Mr. Moss, and supported by several present, it was decided to instruct the Council to formulate a re-stocking scheme somewhat on the lines explained by Mr. Judge, or by any other method which suggests itself to them. Over twenty members gave in their names as being willing to become guarantors to the necessary fund. A hearty vote of thanks was accorded to Mr. Judge for his kindness in coming such a long distance to explain the re-stocking scheme which had met with such success.

In reply, Mr. Judge said he was most gratified at the reception which he had received from his bee friends in Leicestershire. It had given him an opportunity of laying his views before bee-keepers who were evidently suffering from the same scourge which had devastated his own district. He also expressed the hope that other associations would take the matter up, and he should thus be amply repaid for any inconvenience it might have been to him to be present.

A successful honey competition was held, the exhibits being sent to the local hospitals for wounded sailors and soldiers, and other charitable institutions in Leicester.

CORRESPONDENCE.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

QUEENS PASSING THROUGH EXCLUDER.

[9367] May I correct an impression my letter No. 9340 seems to have given Mr. R. B. Manley.

I had no intention of criticising his or anyone's queens seeing that I am a mere beginner.

In mentioning my own queens, I was referring to their exceptional size, as compared with those of other bee-keepers' queens which I have seen in this neighbourhood, and some Italians I imported. Even one of Mr. Simmons' famous "White Star" strain which I have is not so large as the mother of half a dozen of my young queens.

Of course, I quite understand size is

not evidence of extra fertility, but in my own case I have nothing to grumble about after comparing my own results with those of my friends, and what I read in the JOURNAL, and I cannot quite see from what evidence in my letter Mr. Manley infers that "they are none too good."

May I ask him, as one seeking knowledge, why it is the *best* queen that is most likely to get through the excluder? He makes the statement, but brings no evidence forward to back it up. As he is, no doubt, a bee-keeper of some experience, he will probably be able to show me the why and therefore. I had, heretofore, thought it most likely to be only *dwarfed*, or malformed queens so capable.

What I particularly wished to emphasise in my previous letter was that most of my queens were raised from a stock which was condemned last winter with "Isle of Wight" disease, and I have now five young queens presiding over strong stocks, raised from this colony. The total I netted from the nucleus mentioned was 144lbs. sold, and I had about 20 nearly finished sections, which I have fed back to another lot of driven bees.

All my bees are entirely free, so far as I can tell, from "Isle of Wight" disease, but am sorry to say two lots of driven bees which I united have developed it rather badly. In conclusion, I may mention I treated them with Dioxogen, and they appeared to be pulling round, but bad weather kept them in, when it appeared worse. I then tried feeding with Bacterol; it had but little effect, so I fell back to Izal, with which I treated my old stocks, and I certainly believe, in this case at any rate, it has been more efficacious than either. I am hoping to pull them through, as I know there is plenty of young bees and brood, and they fly, even now, for water.—F. M. CLARIDGE.

IZAL AND FOUL BROOD.

[9368] Some little time since my attention was directed to the article in the BRITISH BEE-KEEPERS' JOURNAL of May 25 last [9275] by Mr. I. Hopkins, of Auckland, New Zealand, regarding the treatment with Izal of stocks affected with foul brood.

A more than usually busy season has prevented me asking for your kind permission to make a few remarks upon the subject in your columns.

Mr. Hopkins refers to the late Mr. Cheshire's experiments with Phenol. As a matter of fact, the particular stock first referred to by Mr. Cheshire was definitely cured, but I was able to point out in my 1904 edition of "A. M. B. Farm" that the real basis of cure, though he did not realise it himself, was the fact that he gave a new queen to the then queenless lot: and also that he added healthy bees and brood to the weak foul broody stock.

Mr. Cheshire was quite sure in his own mind, as he explained to me personally, that the Phenol treatment was the means of cure, but, nevertheless, I am so certain, as the result of many definite experiments, that if all cases of bee-disease were treated in a similar manner (re-vitalising manipulation), in addition to the use of a reliable medicinal agent, there would be very little bee-disease in evidence to-day.

I have always pointed out that correct manipulation at the right time is of as much value, if not more so, than the medicinal agent used.

I have repeatedly shown that foul brood may be cured without any medicinal agent whatever, but by the use of Izal as a reliable disinfectant, preventing the further development of the disease, there can be no excuse for the constant presence of foul brood in any apiary.

Mr. Hopkins admits the value of Izal as a powerful and reliable disinfectant, and yet he fails to cure "by the methods I have explained." Now the methods I have given in my work are explicitly described in connection with certain curative manipulations, which have never failed where correctly carried out. Hence Mr. Hopkins has somehow failed to realise the instructions given by me, or he would certainly have had the pleasure of seeing foul brood quickly and permanently disappear.

I may say that foul brood cannot exist in my apiary for the reason I have always adopted these very methods of preventive treatment, which Mr. Hopkins has failed to carry to a successful conclusion. Before I use any hives, quilts, or feeders that may have been out of use, none escape a strong Izal bath, even though I am assured there has been nothing the matter with them. I have had no trouble with foul brood for many years, and if I should find it in a stock to-morrow, within a few days there would be no trace of it.

The reports I have received from many quarters as to the effective treatment of foul brood by Izal, and correct manipulation in connection therewith, are too numerous for me to ask permission to give in the columns of this journal, but I may be permitted to give just one extract from a letter received from a very practical bee-keeper then owning an apiary in New Zealand: "The principles regarding the Izal treatment for foul brood as enunciated by you are, to my mind, absolutely correct. The hives treated show a very marked improvement after treatment for a few days."—SAMUEL SIMMINS.

WEATHER REPORT.

WESTBOURNE, OCTOBER, 1916.

Rainfall, 5.21 in.	Minimum on grass, 25 on 21st.
Above average, 1.06 in.	Frosty nights, 0.
Heaviest fall, .83 on 17th.	Mean maximum, 58.2.
Rain fell on 23 days.	Mean minimum, 49.0.
Sunshine, 69.3 hours.	Mean temperature, 53.6.
Below average, 45.9 hours.	Above average, 4.3.
Brightest day, 7th, 6.4 hours.	Maximum barometer, 30.269 on 20th.
Sunless days, 4.	Minimum barometer, 29.171 on 25th.
Maximum temperature, 65 on 5th.	
Minimum temperature, 35 on 21st.	

L. B. BIRKETT.

Queries reaching this office not later than FIRST POST on MONDAY MORNING will, if possible, be answered in the "Journal" the following Thursday. Those arriving later will be held over until the following week. Only SPECIALLY URGENT queries will be replied to by post if a STAMPED addressed envelope is enclosed. All queries must be accompanied by the name and address of the sender, not necessarily for publication, but as a guarantee of good faith. Correspondents are requested to write on one side of the paper only.

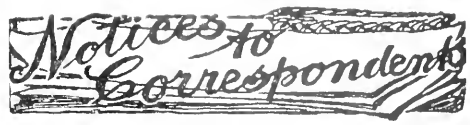
MAKING MEAD.

[9054] I will be obliged for your advice on the following:—I have some framed combs of honey containing also a small amount of pollen. Will you please tell me the weight of this comb I should use per quart bottle of water to make a mild mead for immediate use, and also how to set about it, as I am anxious to make a small quantity to see if it is liked? I have Banck's book on "Mead Making," but it is no help, dealing with comb honey, which is too thick (being partly heather) for extraction.

[REPLY.—First uncap all the honey in the combs, cutting out as far as possible without wasting the honey all the portions containing pollen.

Soak in water just sufficient to cover them for a couple of days. Then add water till an egg floats about half submerged. If too strong add water; if not strong enough add honey.

Strain and boil the liquor for twenty minutes, and take off all scum as it rises. Pour into a vessel to cool, and next day put into a clean cask (for preference an old brandy cask). Let it ferment for about a week, and then bung down lightly; leave for six to twelve months, and then bottle.]



Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. All questions must be accompanied by the sender's name and address, not necessarily for publication, but as a guarantee of good faith. There is no fee for answering questions.

Honey Sample.

J. P. (Rannoor).—The stuff you sent is honey, but of very poor quality and from very mixed sources. It is not at all suitable for "table honey." The best thing to do with it would be to use it for making cough mixture—or cattle medicine.

Special Prepaid Advertisements

Two Words One Penny, minimum Sixpence.

Will advertisers please read these Rules carefully in order to save trouble, as they will in future be strictly adhered to.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not permissible at above rate, but will be inserted at 1d. per word as* **"Business"** *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of 3s. per ¼in., or 5s. per inch.*

PRIVATE ADVERTISEMENTS are only intended for readers having **Surplus Stock** *to dispose of.* **Driven bees, Nuclei,** *and* **Queens that are reared or imported for sale,** *are Trade Advertisements, and can only be accepted under trade terms.*

Advertisements must reach us NOT LATER than FIRST POST on TUESDAY MORNING for insertion in the "Journal" the same week.

Orders for three or more consecutive insertions in "The Bee Journal" entitle advertisers to one insertion in "The Bee-Keepers' Record" free of charge.

PRIVATE ADVERTISEMENTS.

WANTED, a few Sections of Honey; good price paid.—DOLLIS PARK DAIRY, Church End, Finchley.

WANTED, three skeps of bees, in good condition. State price to J. BREACH, Heathfield Cottage, Burntwood, near Lichfield. v 80

BY APPOINTMENT.

IZAL

The Modern High-Power Germicide is a reliable remedy against Foul Brood and Isle of Wight disease.

From the B.B.J., July 22, 1915.

IZAL AND "ISLE OF WIGHT" DISEASE.

"I had lost twenty stocks when I tried Izal with my remaining three stocks which were very badly affected . . . The bees are now in very good condition, due solely to the use of this disinfectant."

Sold Everywhere in Bottles, 6d. and 1/- each.

Ask for full details of IZAL Treatment, sent post free by—

NEWTON, CHAMBERS & Co., Ltd., THORNCLIFFE, Nr. Sheffield.

WANTED, skep of Dutch bees.—Price to MITCHELL, Vine Cottage, Torquay. v 74

WANTED, four or six doz. first grade, well filled sections.—"J. P.," "BEE JOURNAL," 23, Bedford-street, Strand, W.C. v 79

WANTED, several strong healthy stocks, skeps, or hives with sufficient stores for winter, cheap for cash.—ROBBINS, The Statue, Whitton, Middlesex. v 78

WANTED, good heather sections; state quantity and price.—ST. ANN'S CAFE, Manchester. v 77

FOR SALE, one 28lb. tin of heather honey, £1, f.o.r.—CROWE, Stawell, Bridgwater. v 75

40 LBS. wax, raspberry canes, 15s. per 100; black currant bushes, 4s. and 5s. per dozen; choice kinds.—Apply, ALBERT SANDYS, Drayton, Berks. v 75

WANTED, one cwt. of extracted clover honey. —Apply, stating price, to JOHN DUNCAN, 23, Wallace-street, Galston, Ayrshire. v 73

HONEY, Extracted.—Wanted, two or three cwt.; also sections.—Address, with sample, quantity, and price, X. Y. Z., BEE JOURNAL Office, Bedford-street, W.C.

INCANTO acetylene generator, for lantern, 20s.; in good order.—"DYNAMO," "BRITISH BEE JOURNAL" Office, 23, Bedford-street, Strand, W.C.

FOR SALE, by W. HERROD-HEMPSALL, Old Bedford-road, Luton, Ariel 3½ h.p. Motor Cycle and Side Car, in perfect condition; any trial or expert examination allowed; spares, belt, in leather case, two tubes, one cover, valve spring, back axle; all wheels fitted with Peter Union bands, back to saddle, horn, speedometer, three acetylene lamps, special luggage carrier on side car to carry two gallon can of petrol and one quart oil can, in addition to luggage, kick start, three speeds. Ridden by above, to be sold on account of medical advice; offers.

BUSINESS ADVERTISEMENTS.

COMFORTABLE APARTMENTS for Brother Bee-keepers visiting Douglas. Terms: Tea, bed, and breakfast, 3s. 6d.; or full board, 5s. per day.—HORSLEY'S, Merridale House, top of Castle Drive, Douglas, Isle of Man.

ROWE,

28a, Moy Road, CARDIFF,

SELLS Pure Honeys, Colonial and Californian, &c., carriage paid, tins free; cash. Samples 3d. BUYS Home-produced **Run Honey, Sections, and Beeswax.**

IF YOU WANT GOODS QUICK, SEND TO BURTT,

Bee Appliance Manufacturer, GLOUCESTER.

Have you seen my new Catalogue? If not, you should. Send for it NOW.

EXAGGERATION.

Now and again a short paragraph may be found in the daily papers recording some abnormally large crop from a small piece of ground, or the growing of a large fruit or vegetable—the big gooseberry is almost a perennial—and each year some large take of honey from a single stock is also recorded. Those who know what is a fair average weight of honey to expect from a stock of bees naturally look on these "records" with more than a little suspicion. One such small paragraph is now going the rounds of the papers, and has already appeared in the *Daily Telegraph*, the *Daily Mail* and the *Sportsman*. The following letter and cutting have been sent by Mr. O. W. Rowlands, of Barnt Green, Worcestershire:—"I enclose cutting from *Daily Mail*. Is not this rather a 'tall story,' considering there were only three weeks really in which the bees could work this last season?"

The cutting reads: "A stock of Dutch bees gave a Tiverton (Devon) bee-keeper 376lbs. of honey during the past season."

There is no doubt this is a garbled version of a paragraph taken from the *Tiverton Gazette*, possibly by one of the news agencies. It has been "boiled down" (quite likely by someone who knows nothing of bees or bee-keeping), and in the process one of the main points has been omitted. The *Tiverton Gazette* note was as follows:—

"Despite the fact that nearly all the bees in Tiverton died last winter, there has been some good honey made here. One stock of Dutch bees, *and a three-pound swarm* of the same strain, have given their owner no less than 376lbs. weight of first quality honey—a yield that must be almost a record."—The italics are ours.

In connection with the above we have received a few notes from the bee-keeper referred to, and it will be noticed that the swarm was a purchased one and the original stock was swarmed artificially. We quote from his notes as follows:—

"All my bees succumbed to 'Isle of Wight' disease last winter, except one lot of Dutch bees, which showed slight symptoms of disease, and which I saved and stimulated with medicated candy. On May 8 I put on a super of drawn out shallow combs, and on May 31 I made an artificial swarm from this stock.

"On May 25 a swarm of Dutch bees, which I had bought, arrived; it weighed 3lbs. 3ozs. and was hived on six frames. From the three hives I have taken off eleven fully sealed shallow frame supers and six partly filled and sealed eight frames to the super.

"We had drought—not a drop of rain from July 11 to August 11, inclusive. The weather was so dry that my bees capped the honey almost as soon as the cells were filled. The parent stock and the new swarm each filled a super in five days. The clover and lime honey-flow both came together, but Dutch clover bloomed in my garden for close on two months, and to crown all I had three Acacia trees in full bloom above and close to my apiary.

"I ought to add that some of the combs in the brood-chamber were so clogged with honey that to give breeding room I had to extract close on 24lbs. of sealed honey from them, which I added to the total surplus. Both the swarms swarmed again and I united them into one, headed by a Dutch queen."

This puts quite a different complexion on the matter, but the results are still extremely good. The unfortunate part of these exaggerated reports is that people who do not know a bee from a wasp, read them and imagine that in bee-keeping there is a small fortune to be made, and so rush into the business without due consideration. They are usually quite the wrong type of people to make a success of bee-keeping under any circumstances; their bees become diseased, or quite likely they purchase diseased bees to commence with, and after a spasmodic effort for one or two years they give up, poorer and perhaps wiser, after infecting the whole district with disease and proving a nuisance generally to any hard-working, intelligent bee-keepers in the neighbourhood.

BRITISH BEE-KEEPERS' ASSOCIATION.

The Council of the British Bee-Keepers' Association are anxious to obtain gifts of honey for the wounded soldiers in the London Hospital, where it is urgently needed both for food and medicinal purposes. They will, therefore, be grateful for gifts of same, no matter how small, from bee-keepers throughout the British Islands. It is unnecessary to explain our obligations to these brave fellows, who have sacrificed health and limbs for the sake of our country. Gifts should be sent addressed to the Secretary, B.B.K.A., 23, Bedford Street, Strand. The donors' names will be published in the "B.B.J." and RECORD.

W. HERROD-HEMPSALL,
Secretary.

HONEY FOR THE LONDON HOSPITAL.

Amount already received ... 288½ lbs.

A ROLL OF HONOUR.

Although bee-keeping is considered a minor pursuit, we venture to say that it has provided more fighting men than the usual average of any industry. To place on record the part the members of our craft have played in the present war we propose to make a "Roll of Honour," and shall be pleased if our readers will forward us the **Names** and **Addresses**, together with the **Regiment** and **Rank**, of any bee-keeper serving his King and Country at home or abroad; also if killed or wounded.

We print a further list of names to those sent in, and shall be pleased to have other names as soon as possible.

R. McCombie Thom, 1, New Street, West Auckland—2nd Air Mechanic, R.F.C.

Pte. Jonas Ellingham, 43, Granville Road, St. Albans—2/6 Essex Regt.

Pte. A. Groom, 17, Oster Terrace, St. Albans—A.S.C. Remounts Dept.

Pte. G. H. Smith, 67, Seymour Road, Gloucester—2/5 Gloucester Regt.

A WONDERFUL CITY.

THE LIFE-STORY OF THE HONEY BEE.

We have received many letters from those just initiated into the craft of bee-keeping asking us to give some of the "A.B.C." of bee life in our pages for their benefit. That celebrated naturalist, Oliver G. Pike, F.Z.S., F.R.P.S., has kindly contributed to our pages a series of articles entitled as above.

Knowing his work so well, we are certain that not only beginners in bee-keeping, but all our readers will enjoy, and benefit by, reading these articles, written in the delightful and fascinating manner of the author.—EDS.]

CHAPTER I.

BEES AND SUPERSTITION.

For thousands of years the honey-bee has been an ally of man, and some of the ancient records of bee-keeping are exceedingly interesting and amusing, and go to show what superstition and ignorance was attached to this innocent little creature.

The most ancient accounts of all are found in the Bible, but it is impossible to determine which nation first commenced to domesticate bees, or to keep them for their honey. There are many references to bees in the Old Testament scriptures; honey also is mentioned, but there is nothing to prove that bee-keeping was known to the Jews in the early ages of their history, and yet there is no reference in the Old Testament where honey is specified as "wild." King Solomon records the habits of the ant, locust and spider, and it seems strange that if bees were kept such an observer, or royal naturalist as he has been called, should omit to mention anything about the ingenuity and industry of the bee. We have proof, however, that neighbouring nations, with whom no doubt Solomon was in friendly alliance, kept bees for their honey, for in the laws of Solon, about three hundred years after the death of Solomon, we find that there is an enactment forbidding a stand of hives to be placed within three hundred yards of those previously established. This proves that bee-keeping was known and practised by the Greeks. A few years ago, and probably at the present day, the inhabitants of Palestine constructed their hives in a very rude but serviceable manner out of clay, making a kind of oblong box. This method has undoubtedly been handed down from very ancient times, and bee-keeping has probably been practised there during early Scripture times, although we have no mention of it.

The earliest writers worth noting are Aristotle and Virgil, the former born in the year 384 and the latter in the year 70 B.C. Virgil was a fairly accurate observer, although many very curious and amusing things are mentioned by him. Both writers imagined that bees originated in the putrid carcases of animals. The kings, as they called the queens, were supposed to be produced from the brains of the dead animals, for this was the nobler part, and the worker bees from the flesh. Virgil actually gives a recipe for producing a swarm of bees from a dead ox:—"Build a sort of house ten cubits high and ten broad, every side equal, with one door and four windows, on each side one, into which bring an ox thirty months old, fleshy and fat. Kill him with clubs and break the bones to pieces, but be sure not to make him bleed, nor strike too hard at first. Then stop his eyes, ears, nostrils, mouth and other passages with fine linen dipped in pitch. Lay him on his back on a great quantity of thyme, and stop up the doors and windows with clay. In three weeks open the windows on every side but that on which the wind blows. When sufficiently aired close it up, whereupon in eleven days you will find it full of bees in clusters, the king bees being bred from the brains." It would be exceedingly interesting to know if anyone ever tried this weird experiment. I should imagine that the "bees" would be a prize collection of the fly commonly called the bluebottle or blow-fly.

Pliny, another ancient writer, believed this, for he tells us:—"In winter time bee-hives should be covered with straw and often be perfumed with beasts' dung especially, for this is agreeable to their nature, considering that of a beast's car-

case they will be engendered"; and he adds, "It hath this property, to stir up and quicken the bees and make them more lively and nimble about their business."

We are all rather apt to crow over the ignorance of these ancient writers, yet, after all, mistakes quite as grave and quite as incredulous are made by people of the present day. Anyone who cares to travel into any of the Western country villages will be astonished at the vast amount of superstition and ignorance there is connected with animal and insect life.

(To be continued.)

ANCIENT BEE LITERATURE.

X.—EARLY ENGLISH WRITERS.

The century which passed from 1579 to 1679 was rich in works dealing with bee literature in our island, and a dozen of the best books then first saw the light. Hill, in 1579, published his book, "A Profitable Instruction of the Perfite Ordering of Bees." It had nothing original in it, being a simple translation of extracts from old writers professing to be Englished by Thomas Hill, but really the work of one, George Painter. Hill, however, deserves credit for giving us the first bee book published in the English tongue; and so this work marks an epoch in bee-keeping for us.

Even at that early date apiarists are advised to invest in hives "of light boards made square." We hear a lot about the "king." The bees "sit on their eggs as a hen doth," and the young "hatch out in forty-five daies." Their keepers should "entreat bees in a more gentle manner." To handle them safely "make a smoake." Mixed up with a number of strange whimsies and ancient absurdities we have a considerable amount of common sense in this first English bee-book—a thing then "very rare and seldom seen," as our author informs us. Hill was not a bee-keeper; indeed, he was not properly an author, but a compiler, but he gave us a living thing, our first book on bees printed in the English language.

Edward Southern, in 1593, published our first original genuine work on bees, and, moreover, he was a bee master! A later writes testifies, "Southern brak the ice." He hotly contested the all but universal belief that to get honey one must get stings. "I say no," is his verdict. "Goe orderly to them and thou shalt finde them gentle as sheepe." He rigidly inculcated cleanliness in the apiary, as, indeed, did all our ancient writers. Skeps were in general the bees' domicile in the late sixteenth century. He gives us a quaint recipe for making bees stay in a strange hive at swarming time. "Put two handsfull of barley or pease, but mault is the best, and let a pigge eat it, then wipe it with an old cloath." In his "fourteen years' experience" he discovered many genuine points useful to bee-keepers, and Purchas, no mean authority, highly commends his work as a whole.

John Levett, about 1600, comes next in chronological order. He claims to have had an "unparalleled experience" as an apiarist, and in the form of a dialogue carried on with a friend, he presents the fruits of his acquired knowledge, and these two, like a pair of lovers, never exhausted their theme. "To talk of bees to those who love them not is like musie out of tune." To succeed with the pastime requires small expenditure, only a "little paines," but this to a true bee-keeper should be a delight and not by any means an "irksome or laborious toyle." The old idea of government in the hive interior comes out strong in Levett. "There is a king, with his generall guard of souldiers. They have captains, colonells, and generalls."

In our next work, written by Rev. Charles Butler, who wrote "singularly wel," as one of his great successors tells us, we have a classic amongst early works, and the author is a prince amongst our galaxy of writers during the century we are considering. The titles of these old bee books are a study in themselves, and we may take this one as a specimen. "The Feminine Monarchy or the History of Bees. Showing their Admirable Nature and Property, their Generation and Colonies, their Government, Loyalty, Art, Industry, Enemies, Warrs, Magnanimity, etc., together with the right Ordering of them from time to time, and the sweet Profit arising thereof. Written out of Experience by Charles Butler, etc., 1609." The very title, "The Feminine Monarchy," shows that Butler was ahead of his time. If he did not indeed see the light of later discovery he was groping very near to a sight of the vision.

Butler gives quite a number of facts, rules, and maxims which have a modern sound. Only a few samples can be given. The best time to handle bees is when the old ones are out foraging. He advises a "hood of bouttering," the prototype of our modern bee veil. Handle them gently with as little businesse as possible, he advises. Bee-keeping is to be learned from "experience." He discovered that a bee is "a year's bird," not living five, ten, or more years, as was then currently believed. Bees in cleanliness are "a mirror to the finest dames." Bees ply their toil like men in harvest, and they gather "the quintessence of all sweetness." Their Order is perfect; self is wholly subordinated to the good of the community. Bee-keeping he found a

delightful and profitable occupation, fitting well into his clerical duties. Many of our earliest writers were ministers.

William Lawson, 1618, advocates the carrying on of gardening and fruit growing to go hand in hand with bee-keeping, and, as far as profit goes, he assigns bees the first place. The title of his book is "The Country Housewife's Garden." He will not count her any of his good housewives that wanteth either bees or skilfulness about them. Much might be extracted, but where so much is interesting it is difficult to make a selection.

Richard Remnant, 1637, and Samuel Hartlib, 1655, deserve a more lengthy treatment than space allows. The latter wrote during Cromwellian days, hence his work is entitled "The Commonwealth of Bees." He is notable chiefly for inventing the first Observatory hive, although he himself goes back to Pliny's time for the original, but he claims for himself only that he "finished the essay."

Rev. Samuel Purchas, 1657, is a second giant amongst early writers, fit almost to stand beside Rev. Charles Butler. As space does not permit copious extracts, perhaps his title may best give an idea of his important work.

"A Theatre of Politicall Flying Insects, wherein especially the Nature, the Worth, the Work, the Wonder and the Manner of Right Ordering of the Bee is Discovered and Described: Together with Discourses Historical and Observations Physical, concerning them. And in a Second Part are annexed Meditations and Observations, Thelogical and Moral, in three Centuries upon that subject. By Samuel Purchas, Master of Arts, and Pastor of Sutton in Essex—London: Printed by R. J. for Thomas Pankhurst, to be sold at the shop at the Three Corners in Cheapside, over against the Great Conduit, 1657."

John Gedde, 1675.—Much controversy has been carried on as to whether this author was the inventor of the system whereby bees were kept in colonies—the first inventor, that is, of bee boxes. Perhaps we can at least give Gedde the credit of being the man who *perfected* the hive which first gave succeeding bee-keepers the foundation from which was evolved our frame-hives.

J. Worlidge, 1678, strongly advises the use of wooden hives, and he practised the art of storifying, and used at least bars, if not frames. Yet, alas! his final conclusion is "It is best to take bees by the usual way of smothering them by the fumes of brimstone: let no one imagine honey can be taken and bees preserved!"

Our century is rounded off by the work of Moses Quesden, 1679. He was "Bee Master to the King's Most Excellent Majesty." He supplied the table of King Charles II. with "right virgin honey," and gave demonstrations in the Royal Gardens in St. James' Park. He worked with Gedde's hives, and claims to have had surplus takes of 64lbs., 67lbs. and 57lbs. in 1677. He appears to have been a sound practical bee-keeper, and, like all the others named, was a real "Bee Master."

M.

ONTARIO BEE-KEEPERS TO MEET IN TORONTO IN DECEMBER.

The Ontario Bee-keepers' Association will hold its annual convention on Tuesday, Wednesday and Thursday, December 12, 13 and 14, in Toronto. This later date than usual will be welcomed by the bee-keepers, as the great rush of fall apiary work will be over.

A very interesting programme, extremely practical, has been arranged by the executive committee. Prominent bee-keepers from both Canada and the United States will be present. Mr. C. P. Dadant, Hamilton, Illinois, editor of the *American Bee Journal*, will take up the question of "Prevention of Natural Swarming." The Dominion apiarist—Mr. F. W. L. Sladen—in charge of the Bee Investigation work on the various experimental farms, will speak of some line of his investigations. Other topics will be introduced by Mr. W. A. Chrysler, of Chatham; Mr. G. A. Deadman, Brussels; Mr. S. B. Bisbee, Beamsville; Mr. E. T. Bainard, Lambeth, and Mr. W. J. Craig, of Brantford.

Of special interest from the social side of the Convention will be the banquet on Wednesday evening, at which Mr. Couse will speak of the "Past Presidents of the O.B.A." Mr. Couse has been a member continously since the association was organised, and for many years held prominent positions on the executive committee. His personal acquaintance with the past presidents enables him to handle his subject in a very interesting and able manner.

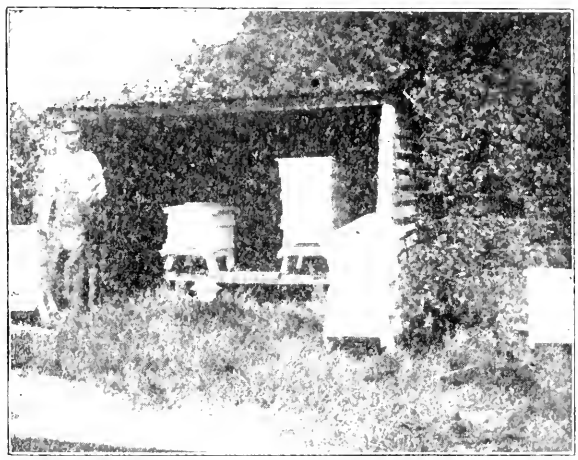
Programmes will be ready for distribution shortly, and may be had by applying to the Secretary-Treasurer, Morley Pettit, O. A. College, Guelph.

A LETTER FROM THE EGYPTIAN FRONT.

[9369] Being a subscriber and constant reader of your valuable paper, I should esteem it a great favour if you would allow me a little space to give your

readers an account of what can be done with bees, even by a soldier who is on Active Service. To begin with, my friends may be surprised to hear that I am now at the Front again, this time on the Egyptian Front, and I am writing this letter in the heart of the Desert, just behind the first line trenches. I may say there is very little life to be seen in this out-of-the-way place. So far, all I have seen in the way of animal and insect life are a few chameleons, lizards, and a rather funny species of mice. They are about the size of a small rat, brown in colour, and the peculiar part about them is the eyes, which are about as large as those of a full-grown rabbit. These mice can be seen everywhere, burrowing in the sand, and they feed on lice and insects. The other night I had the unpleasant experience of waking up in the middle of the night and finding one in my pillow; this was while I was on picquet duty in the trenches. There are also plenty of very big beetles, also very large red ants, and, needless to say, any amount of lice, which I must admit we often find rather too familiar. As I write this letter I look round me and can see nothing but sand for miles and miles. I am given to understand that we are on the very same wilderness which the Israelites passed over when going out of bondage from Egypt to the Holy Land.

Well, to get more to the point about the bees. I may say that owing to being stationed so far away from home I was compelled to close the "model apiary" at Hunstanton. At the same time I was determined not to be without any bees, so in conjunction with my friend, Mr. F. A. Smith, of Bushey, I have established a most successful apiary at Bushey, near Watford. I found this most convenient, and during my seven months' convalescence (since my return from Gallipoli) have spent many happy hours among the bees. I started the apiary with two stocks of Italians early in April. I was then stationed at Shoreham Convalescent Camp, in Sussex. With the help of Mr. Smith, who was very keen and energetic, I was able to increase the apiary to eight stocks by the end of June. From those two stocks and their increase we took about 180lbs. of extracted honey, and about 60 sections, all first quality honey, making a total of 240lbs. We also reared all the queens we required. I enclose a photograph of the apiary, showing a few of the hives. I think this is a remarkably good yield, as often I could not get over to Bushey to look at the bees for a month or six weeks. I think bee-keeping is a splendid hobby for a soldier, as after duty he can always pay a visit to some bee-keeper in the district, who, I am sure, will be only too pleased to see him. In photograph No. 2 you will see me clipping the queen's wings for one of my bee-keeping friends at Watford, who works up in town, and cannot be on the spot when they swarm. This I did on Whit Monday while on a week-end leave from Shoreham Camp. Early in July I was passed fit for Active Service again, and joined my third line at Hulton Camp, only eighteen miles from Watford, so I was always able to slip over and look at the bees, and as I did not leave England until August, I was able to re-queen each stock with 1916 fertile Italian queens. I only hope they will go on well, and will be ready for me when I come home again. It may interest readers to know that all these bees were put on frames and hives affected with "Isle of



CORNER OF APIARY AT BUSHEY.

Wight" disease, and up to the present they are doing well. I always adopted this method before the war, and by my special system of dealing with bees can easily steer clear of the disease. I believe it is quite unnecessary to burn the inside of hives and destroy clean combs affected with disease, and I have come across many prominent bee-keepers who have followed the same plan with great success.

Well, I have already trespassed on your space, so, in closing, am pleased to say I am quite well. If any kind reader would care to send me a few bee papers occasionally they would greatly help to brighten

CLIPPING THE QUEEN'S WINGS.

the monotonous hours we have of waiting for the Turks to attack us. Owing to the great difficulty of obtaining writing paper out here it is impossible to write to each of my friends personally, but I hope they will take this as a general letter. I will write again shortly. Trusting that all bee-keepers had a good profitable season, and that the "Isle of Wight" disease is not causing so much havoc amongst our little friends. In conclusion, I may add that I hope this war will soon be over, and we shall be back again before long, when we shall be able to have some more interesting chats about the bees.—No. 2366, Pte. Julian E. Lockwood, "D" Company, 1/5th Battalion Norfolk Regiment, Egyptian Expeditionary Force.

QUACKERY OR QUACKING?

[9370] I did hope that Mr. Heap would see his way clear to somewhat moderate his harsh treatment of what has proved to be a beneficent acquisition to our large store of proved remedies to further the cause, and give aid to the bodies of our little insects. However, as he still adopts that air of finality and utter disregard of the opinions of others he might equally as well flout those opinions in regard to proven remedies for, say, foul brood, etc., which remedies, by the way, he has had to claim a knowledge of and belief in, to have secured the recognition he has to his credit. Comparing notes one has no alternative but to sum the whole thing up under the latter part of my heading.

Then with regard to the definition of a diseased stock as laid down by him. In the stock referred to by me some time ago as a reserve nucleus I had, and from which I killed no less than twenty bees affected badly with the "Isle of Wight" disease before the colony covered three combs, the cause was no doubt by feeding with inferior sugar. By putting into a clean hive and using plenty of Izal, this hive furnished the comb and queen for a shook swarm, which was sold, and up to last year had increased to three more, autumn count. Hence my rather strong leaning to the "digestive disease" idea. I know I have distributed over twenty colonies in the County of Surrey indirectly, but owing to the war I have not been able to carry out some strict tests I had set my heart on, but I have not heard that any have failed yet. I mention this, but do not wish to influence Mr. Heap or others as to its authenticity or merits. I am a very firm believer and, I hope, helper in the bee-keeping fraternity. Mr. Heap thought Mr. Manley a genuine critic. Why not treat him as such? All of us by now know what Mr. Heap's ideas are as to the definite tactics he would use when he makes his mind up. Might I ask that he lets us off any more "gatherings," as we prefer something practical, if it is only an attempt.—A. H. Hamshar.

DUTCH BEES AND IMMUNITY.

[9371] Early in the year, owing to glowing accounts published in the British Bee Journal from leading authorities telling of the resistant powers of Dutch bees to "Isle of Wight" disease, I was induced to hurriedly deposit £2 for a stock, which came to hand May 9. The bees showed more vigour than those of my own, which still survived, and for a few days I saw no signs of disease. I have always read of Dutch bees being light brown—I write from memory—but there were strong Italian markings on many of the bees sent me as Dutch. Within a week I noticed crawlers from this hive, which stood by itself on a plot of ground which had not previously been occupied

by bee hives. The hive I put them in was well scorched with painter's lamp for safety. If these bees had not the disease when they came, it must develop much more rapidly than a writer in B.B.J. led us to believe, and also proves the Editors' opinion—not immune. Maybe I did not get pure Dutch bees.—J. G. Nicholson.

ECHOES FROM THE HIVES

I have not sent you a report for many years. As you are aware, we got into trouble with "Isle of Wight" disease, and destroyed nearly 300 stocks. We got about a dozen swarms in 1915, and at the end of the season got driven bees from the same district, and built up twenty-five stocks, giving one lot to each stock. They required no feeding, as they got combs from the swarms; they had to work up their brood nest last spring from six or seven combs to eleven combs, and they had all these super combs to draw from foundations. The past season has been the latest for thirty years. Weather got dry and warm on July 19; then we got three weeks of good bee weather, and in this time we got the greater part of our honey, blended clover and bell heather. I think the best honey we ever saw. The common ling heather season was a failure. Our take was 3,400lbs.—Andrew Muir and Sons, Kirkcowan.

As one of your regular readers, I thought perhaps you would like to hear my experiences with my bees during the past season.

The previous year I lost my two stocks. Through their being weakened by wasp attacks they were unable to survive the winter.

Early in June I procured a swarm, which I hived on eight frames, later increasing to ten.

In the middle of July a very strong swarm issued, which was placed in my spare hive. Ten days after another very strong swarm issued, which I sold to a neighbour interested in bees.

Of course, during this period there was very little honey being stored in the sections. But in the beginning of August the bees settled down to work, and by the middle of September from the two hives I had taken 86lbs. of section honey. They are now (October 16) very strong, with plenty of stores, and look like wintering successfully.

This I think you will agree with me is a very good record for one season.—Charles Wroxham, Radlett, Herts.

Notices to Correspondents

J. Ellison (Lincs.), Regular Reader (Loughborough). *Disinfecting Combs.* Combs that have had no brood reared in them may be fumigated. You may use Bacterol (Aeriform) or Formalin; the former is the best. It is much better and safer to burn old brood combs and use new frames and foundation. Hives should be scorched inside with a painter's lamp.

S. B. Pickbourne (Northants.). *Pollen Carrying a Sign of Breeding.* It is generally considered a sign that there is brood, especially in the early spring, but queenless colonies will also carry in pollen even when all the larvæ are sealed.

Ascertaining Quantity of Stores in Winter. You should have an idea what stores there are when packing up for winter. On a mild day you may turn the quilt back, and if no sealed honey is visible at the top of combs there is little or none in the hive. It is, however, very inadvisable to disturb bees during the winter. If there is any doubt you cannot do wrong by giving them a cake of soft candy.

Do Bees Know the Person Who Handles Them?—No. In the summer time the life of the bee is too short, and it is too seldom at home for them to do so. In the winter they are not handled, and the bees die off in the spring.

"Harley" (Enfield).—*Keeping Races of Bees Pure.*—The bees are almost certain to cross-breed with the stocks less than 100yds. apart, even with a road and houses between them, as the queen and drone meet in the air.

J. Barnsley (Atherstone).—We cannot trace it. Try Mr. A. H. Bowen, Coronation Road, Cheltenham. It will be better to make a 2in. hole in the top for feeding purposes. Leave them in their present habitations and wrap up warmly.

Honey Sample.

J. E. M. (Paignton).—It is slightly fermented. Heat it to about 110 deg. Fahr., and if possible keep it exposed in a warm place free from dust to improve the density.

Suspected Disease.

J. C. (Atherstone).—Both samples of bees were suffering from "Isle of Wight" disease. Do not use the very dark sugar, and do not give syrup now, but candy. If you cannot get white sugar the only thing is to risk the use of Demerara.

Special Prepaid Advertisements

Two Words One Penny, minimum Sixpence.

Will advertisers please read these Rules carefully in order to save trouble, as they will in future be strictly adhered to.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not permissible at above rate, but will be inserted at 1d. per word as* **"Business"** *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of 3s. per 1in., or 5s. per inch.*

PRIVATE ADVERTISEMENTS are only intended for readers having **Surplus Stock** *to dispose of.* **Driven bees, Nuclei,** *and* **Queens that are reared or imported for sale,** *are Trade Advertisements, and can only be accepted under trade terms.*

Advertisements must reach us NOT LATER than FIRST POST on TUESDAY MORNING for insertion in the "Journal" the same week.

Orders for three or more consecutive insertions in "The Bee Journal" entitle advertisers to one insertion in "The Bee-Keepers' Record" free of charge.

PRIVATE ADVERTISEMENTS.

WANTED, a few Sections of Honey; good price paid.—DOLLIS PARK DAIRY, Church End, Finchley.

BY APPOINTMENT.

IZAL

The Modern High-Power Germicide is a reliable remedy against Foul Brood and Isle of Wight disease.

From the B.B.J., July 22, 1915.

IZAL AND "ISLE OF WIGHT" DISEASE.

"I had lost twenty stocks when I tried Izal with my remaining three stocks which were very badly affected . . . The bees are now in very good condition, due solely to the use of this disinfectant."

Sold Everywhere in Bottles, 6d. and 1/- each.

Ask for full details of IZAL Treatment, sent post free by—

NEWTON, CHAMBERS & Co., Ltd., THORNCLIFFE, Nr. Sheffield.

WANTED, good heather sections; state quantity and price.—ST. ANN'S CAFE, Manchester. v 77

WANTED, three skeps of bees, in good condition.—State price to J. BREACH, Heathfield Cottage, Burntwood, near Lichfield. v 80

TWENTY good telescopic pattern hives, 5s. each; fifty section and shallow frame racks, 1s. 3d. each; ten 28lb. tins, 10d. each.—"X. Y. Z.," "BEE JOURNAL," 23, Bedford-street, W.C.

WANTED, geared honey extractor.—Send particulars and price to PAULIN, Brackenhurst, Bexley. v 83

EMPTY hives wanted now.—Write, C. PARISH, Addington, Surrey. v 81

WANTED, a few sections of honey.—A. E. WARREN, Simpson, Bletchley. v 82

FOR SALE, by W. HERROD-HEMPSALL, Old Bedford-road, Luton, Ariel 3½ h.p. Motor Cycle and Side Car, in perfect condition; any trial or expert examination allowed; spares, belt, in leather case, two tubes, one cover, valve spring, back axle; all wheels fitted with Peter Union bands, back to saddle, horn, speedometer, three acetylene lamps, special luggage carrier on side car to carry two gallon can of petrol and one quart oil can, in addition to luggage, kick start, three speeds. Ridden by above, to be sold on account of medical advice; offers.

INCANTO acetylene generator, for lantern, 20s.; in good order.—"DYNAMO," "BRITISH BEE JOURNAL" Office, 23, Bedford-street, Strand, W.C.

FOR SALE ½ plate Koilos camera, with Goerz Dopp anastigmat f/6.5 lens, can be used either for hand or stand work, twelve single dark slides and film pack carrier. The whole packs in stout block leather sling case, 9in. long, 6in. deep, and 2½in. wide; also light brass telescopic tripod, in leather sling case, all in excellent condition, and used by me to take the illustrations in "Helpful Hints" and "Continental Wanderings." The outfit for sale in one lot for £6; reason for selling have bought a Reflex. A splendid opportunity for anyone wanting a good reliable camera. Will send on approval; Deposit.—HERROD, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

BUSINESS ADVERTISEMENTS.

COMFORTABLE APARTMENTS for Brother Bee-keepers visiting Douglas. Terms: Tea, bed, and breakfast, 3s. 6d.; or full board, 5s. per day.—HORSLEY'S, Merridale House, top of Castle Drive, Douglas, Isle of Man.

ROWE,

28a, Moy Road, CARDIFF,

SELLS Pure Honeys, Colonial and Californian, &c., carriage paid, tins free; cash. Samples 3d. BUYS Home-produced **Run Honey, Sections, and Beeswax.**

IF YOU WANT GOODS QUICK, SEND TO BURTT,

Bee Appliance Manufacturer, GLOUCESTER.

Have you seen my new Catalogue? If not, you should. Send for it NOW.

THE "FREEMASONRY" OF BEE-KEEPING.

The goodwill and helpfulness of bee-keepers towards one another is well known, and is so general that it may be said to be a feature of the craft. The novice who is just commencing is almost invariably most agreeably surprised at the amount of help and advice he receives from experienced bee-keepers, and those who are not bee-keepers, but have come into close contact with bee-keepers and bee-keeping, have been simply astonished at the "camaraderie" prevailing among the fraternity.

We wonder sometimes how it is there has never been a guild or "Worshipful Company" of bee-keepers established years before our present associations. Had the pursuit of bee-keeping been suitable for a town or city no doubt there would have been one, the affairs of which would have been carried on with becoming dignity and decorum, for who ever knew a bee-keeper worthy of the name to be a loafer, or to spend the bulk of his spare time drinking or gambling—or both?

An old proverb says "There is a black sheep in every flock," and one does occasionally drop across a grumpy, selfish bee-keeper. One of our most valued readers has had this unpleasant experience, of which he sends us the following account, names and places being suppressed for obvious reasons:—

"Dear Sir,—I heard I had a neighbour bee-keeper about a mile away, so I, as a brother bee-keeper, paid him a visit. I found he had ten or twelve stocks in lard boxes. *No* frames, but used just the same as a straw skep.

"He told me he should destroy all his bees at the end of the year, except one small straw skep, which was scarce large enough to hold a 2lb. loaf of bread. His idea is that by destroying his bees he will keep his apiary clear of 'Isle of Wight' disease, and will rear stock from the small skep.

"He said one of his neighbours wanted to buy bees from him. I offered to buy all the lot to drive and unite with my own, before closing them up for winter, but he assured me that he would not sell bees to anyone in the district, because *he* does not want anyone else to have bees there, because other persons having bees would make it worse for his own when out gathering, as if others were in the field there would not be so much for his bees to gather.

"I came away from him thinking that, although he is an educated man, still there is a lesson he may learn from his 'Commonwealth' colony of bees. Yours faithfully, J. D.

"P.S. Do you know of a desert island suitable for this man?"

Fortunately this kind of bee-keeper is the exception, and should his one little stock fail to come through the winter no one will waste any sympathy on him.

THE ROYAL SHOW.

Our readers will notice that the Council of the B.B.K.A. have decided to hold a competition if possible at the Royal Show at Cardiff next year on the lines of that held this year. There has been some excellent honey gathered during the past season, and we hope all those who possibly can will save some of it for competition at "The Royal" next year. As the show is held rather too early for the honey of the current year to be shown in any quantity, honey of any year may be staged at the Royal Show.

"ANCIENT BEE LITERATURE."

In the article under this heading in our last issue, the first column on p. 360, second line from the bottom, "Moses Quesden" should read "Moses Rusden."

A ROLL OF HONOUR.

Although bee-keeping is considered a minor pursuit, we venture to say that it has provided more fighting men than the usual average of any industry. To place on record the part the members of our craft have played in the present war we propose to make a "Roll of Honour," and shall be pleased if our readers will forward us the **Names** and **Addresses**, together with the **Regiment** and **Rank**, of any bee-keeper serving his King and Country at home or abroad; also if killed or wounded.

We print a further list of names to those sent in, and shall be pleased to have other names as soon as possible.

Sapper H. Broughton, Pine Cottage, Alers Road, Bexley Heath, Kent.—London Electrical Engineers.

BRITISH BEE-KEEPERS' ASSOCIATION.

The Council of the British Bee-Keepers' Association are anxious to obtain gifts of honey for the wounded soldiers in the London Hospital, where it is urgently needed both for food and medicinal pur-

poses. They will, therefore, be grateful for gifts of same, no matter how small, from bee-keepers throughout the British Islands. It is unnecessary to explain our obligations to these brave fellows, who have sacrificed health and limbs for the sake of our country. Gifts should be sent addressed to the Secretary, B.B.K.A., 23, Bedford Street, Strand. The donors' names will be published in the "B.B.J." and RECORD.

W. HERROD-HEMPSALL,
Secretary.

HONEY FOR THE LONDON HOSPITAL.

Amount already received ... 288½ lbs.

The Monthly Meeting of the Council was held at 23, Bedford Street, Strand, London, W.C., on Thursday, November 16, 1916. Mr. W. F. Reid presided. There were also present:—Miss M. D. Sillar, Messrs. A. Richards, G. F. Faunch, E. Walker, G. J. Flashman, J. Smallwood, G. W. Judge, J. Herrod-Hempsall, A. G. Pugh, J. B. Lamb, and Sir Ernest Spencer. Association representatives: Colonel Jolly (Somerset), G. Horscroft (Essex), Ff. Ball (Bucks), W. W. Prior (Crayford), and the Secretary, W. Herrod-Hempsall.

Letters expressing regret at inability to attend were read from Messrs. T. W. Cowan, J. Price, C. L. M. Eales, T. Bevan and G. Bryden.

The minutes of the Council meeting held on October 19, 1916, were read and confirmed.

Mr. A. E. Allen, Mr. W. Anson and Mr. H. Bright were elected members.

The Devon Association nominated Mr. E. H. Oldham as their representative, and he was accepted.

The report of the Finance Committee was presented by Mr. Smallwood, who stated that payments into the bank for October amounted to £7 17s. 9d., the bank balance at the end of October being £126 14s. 3d. Payments amounting to £10 were recommended.

After considerable discussion, introduced by Colonel Jolly, Mr. Richards proposed, Mr. Smallwood seconded, and it was carried unanimously, "That the British Bee-keepers' Association draw up a re-stocking scheme for the benefit of those associations who wish to carry out such work, and that a sub-committee be formed to deal with the matter."

The following were elected as the sub-committee to deal with the matter:—Mr. W. F. Reid, Sir Ernest Spencer, Messrs. G. Horscroft, G. W. Judge, A. G. Pugh, Colonel Jolly, G. Bryden, J. Smallwood and A. Richards.

It was resolved that, if possible, the honey competition be held at the Royal Show at Cardiff next year on the same lines as that at Manchester this year.

A letter of welcome with promise of help at the Royal next year was read from the Glamorganshire Association, and the secretary was instructed to reply to the kindly sentiments therein expressed.

A communication from the hon. secretary of the newly-formed Kent Bee-keepers' Association notifying the change of name to the above from Crayford and District was received and accepted.

Next meeting of Council December 21, 1916, at 23, Bedford Street, Strand, London, W.C.

BLURTS FROM A SCRATCHY PEN.

POTTED BEE-KEEPING.

Queen good
Plenty brood.

Strong stocks
No knocks.

Falling clover
Season over.

Sell honey
Pocket money.

Winter store
Galore.

Roofs dry
Go bee-bye.

J. SMALLWOOD.

RANDOM JOTTINGS.

THE ALLEGED CURES OF "ISLE OF WIGHT" DISEASE.

By Charles H. Heap, Reading.

II.

In this article I intend to deal with Dioxogen. Dioxogen is but a fancy name for peroxide of hydrogen, and peroxide of hydrogen, as several correspondents have already told us, consists of the same gases as water, with this difference—that it contains an extra molecule of oxygen, which gives the compound its importance. Peroxide of hydrogen, I understand, is somewhat unstable, and therefore dilute solutions are sold. In surgery it is very useful for washing fetid suppurating sores owing to its power of oxidising waste matter; but it is not for other purposes a favourite antiseptic.

Let us now consider Mr. Hollis's claim that by the use of Dioxogen he succeeded in curing a stock of bees. We have to note first of all that he bought peroxide of hydrogen in a dilute solution; that dilution is carried still further by the addition of six more parts of water. The bees are sprayed with an atomiser, and it is questionable whether

the quantity of liquid that would fall upon each bee would equal in volume a minim. However, we will say it is a minim. Some of it would probably evaporate, and some part with its extra molecule of oxygen before the bees could swallow it; but as I want to give Mr. Hollis all the benefit I can, I will assume this does not happen, and I will further assume that each bee gets the full dose of one minim. The bee will then have, supposing the peroxide of hydrogen were, when bought, undiluted, one-sixth of a drop of the compound in its stomach; but as Dioxogen is probably only a 50 per cent. solution (I do not know) the dose of peroxide of hydrogen would be one-twelfth of a minim taken into its stomach. In either case if the drug were to have a lethal effect, it would have to remain in actual contact with the pathogenic organisms for hours—an unlikely event. We have also to reckon with the fact that the peroxide of hydrogen would come in contact with the contents of the stomach and intestines, bringing about their oxidisation, liberating the extra molecule of oxygen, and leaving a residue of pure water. This is conjecture, of course, but the main point to remember is that the organisms which are bringing about the destruction of the bee will not be freely exposed to the compound. They are in the interior of the cells of which the walls of the alimentary canal are composed, and will therefore be safe from the action of the medicine.

If I had informed the bee-keepers of Great Britain that I had "cured" a stock of bees suffering from "Isle of Wight" disease by spraying them with rain-water, morning dew, or thawed hoar-frost, would they have fallen on my neck and kissed me just as they have been doing with Mr. Hollis? Not a bit of it. They would have come to the conclusion that I was a fit candidate for Colney Hatch. Peroxide of hydrogen is a natural product found in rain-water, dew and hoar-frost, and among other places in the neighbourhood of pine woods. Commercially it is obtained by suitable treatment of oil of turpentine and other aromatic bodies. At the best dilute peroxide of hydrogen might only have a slight inhibitory and not a lethal effect. Much more potent drugs than hydrogen peroxide have been tried and have failed. Here is a list of those I can call to mind in the order in which they have been tried :—

Flowers of sulphur dusted on the bees.

Izal coloured with cochineal diluted with water and used as a spray.

"Ayles' Cure," consisting chiefly of creosote, with which interiors of hives were painted.

Quinine given in syrup.

Naphthol Beta given in syrup.

Ipecacuanha given in syrup.

Epsom-salt given in syrup, followed by phenol, also in syrup.

Crude carbolic acid in syrup.

Pea flour, which was put forward eight years ago, and, rightly, ridiculed at the time (not by me), is again suggested by Mr. Hamshar, who has written many extraordinary things about the disease. Now another cleric has suggested aromatic chalk powder as a remedy. The next thing we shall hear of will be brick dust and flint broth salted and peppered to taste. Among the failures Dioxogen will find a place, and I venture to think also Bacterol, which has received the benediction of our old friend William Woodley, one of the big bee-keepers who opposed the Bee Diseases Bills. There are several proprietary "remedies" which I have not seen. The proprietors of these articles do not send me free samples for trial, because I suppose I am, as Mr. Woodley so nicely puts it, a doubting Thomas, whose opinion they would be tired of waiting for, and might not (though fair and candid) be of any money value when they got it.

A widespread belief prevails that "Isle of Wight" disease is rapidly fatal, at any rate that a stock will die out in the course of a few weeks. This is not the case unless, perchance, the bees have discovered an untenanted hive well supplied with badly infected stores. Under normal circumstances they will drag on for a long time, and that is why these so-called quick cures may always be regarded with suspicion. Bees which in the spring seem on the point of extinction will sometimes rally in a remarkable way, and cast swarms, or reward the bee-keeper with a nice quantity of surplus honey. I have known three diseased stocks to throw off seven swarms. That crawling bees may not be seen for weeks is no proof that the disease is absent. The disease is only masked by natural conditions prevailing at the time.

In my opinion no drug remedy will ever be successful in placing apiculture on a secure footing again. I think so for three reasons. The first is that nearly all minute low forms of life are comparatively difficult to destroy, particularly so when they are capable of forming spores, as in the case of *Nosema apis;* the second, that an agent sufficiently potent to annihilate the pathogenic organisms is extremely likely to kill the bee: and the third, the impossibility of ensuring that every bee will receive its dose of the germicide at the right time. Great hopes have been raised by the announcement that the Board of Agriculture's investigators believe they have found a remedy for the disease. Even assuming that they have it will not rid us of "Isle of Wight" disease. Apiculture will then be for the few, not for the many. In support of this view let

me point to foul brood, a series of diseases a hundred times easier to combat than *Microsporidiosis*, and yet in spite of the fact that a remedy for it has been known for about 300 years, these diseases are still rampant in many parts of the country. I have been in districts where from 50 per cent. to over 80 per cent. of the stocks were suffering from it. In view of this fact what hope is there of clearing out "Isle of Wight" disease with drugs? If I were to discover to-morrow a drug that would be an absolute remedy for "Isle of Wight" disease I should think many times before making it public. Two questions would present themselves, namely: Shall I attempt to make a small fortune? or Shall I put my patriotism before my pocket? If my patriotism prevailed I should keep the remedy a secret. Drugs have never banished an infectious disease, and I suppose never will.

[Since writing this article four or five weeks ago I have learnt that Dioxogen contains only the ordinary commercial 3 per cent. solution of hydrogen peroxide. The strength used by Mr. Hollis is consequently a 0.5 per cent. solution, which makes his claim more ridiculous than ever. It will enable readers to visualise the solution if I say that in 100 gallons of the 0.5 per cent. solution there would be just two quarts of pure hydrogen peroxide.]

"ISLE OF WIGHT" DISEASE AND MR. HEAP'S "RANDOM" STATEMENTS.

By Rev. A. H. Hollis.

If it is not trespassing too far upon your patience, Mr. Editor, might I be allowed to express through the medium of the BRITISH BEE JOURNAL my appreciation of the kindness and goodwill of so many of your readers? The correspondence you have published and the many kind letters I have myself received are a proof that bee-keepers are actuated by a fine spirit of brotherliness to one another. There is, however, no rule without its exception. And if you will allow me I will try to reply to the criticisms of Mr. Heap. I know nothing of him as a bee-keeper beyond what he himself has told us. He confesses: "I have no healthy stocks of bees, and I have never got a stock through an attack of 'Isle of Wight' disease."

That is Mr. Heap's misfortune, and as brethren of the craft we are sorry for him, and would like to help him. But he spurns our sympathy and our offer of help. "I am not troubled about fraternity," he tells us, in his amiable fashion. As a bee-keeper he confesses he is an absolute failure. And because he has failed he refuses to acknowledge that others can be successful.

Mr. Heap has spoken; let all lesser fry keep silence. In the eyes of this man of expert knowledge we are all pigmies and objects of ridicule. Let us come to his last "Random Jottings." I had thought, and so doubtless had others, when Mr. Heap wrote his short article headed "Blind Leading the Blind," that he did so believing he was thereby helping the interests of bee-keepers. But he was seemingly actuated by no such thought.

He confesses, "I wrote it with the deliberate intention of provoking castigation."

That is, at least, an honest confession. Having failed as a bee-keeper, and knowing of no remedy for his misfortunes, he is made painfully aware that his expert knowledge and advice are at a discount with all sensible bee-keepers. A discovery of that kind is disappointing to a vain man, and decidedly galling.

But does he imagine that the use of cheap ridicule will reinstate him in the esteem of his fellows? As he has not experimented with Dioxogen upon diseased stocks, his arguments are pointless.

It would be more seemly under the circumstances to preserve an open mind on the subject as so many others are doing.

He accuses me of "backing up an unproved experiment with scientific jargon."

Your readers are the best judge of that. I might have written to the B.B.J. three months earlier than I did (many bee-keepers have said they only wish they had known of the Dioxogen cure earlier in the year), but I preferred to wait until I could be quite sure that the disease was stamped out in my stocks.

As there was no sign of any reappearance of the malady I wrote to the Editor on July 20 giving an account of my experiment. What proof of cure will convince Mr. Heap? My bees have provided me with abundance of honey, and I have packed them up comfortably for the winter with sufficient stores to carry them through. They were so strong that when removing the supers and shallow boxes I wondered if the bees would have sufficient room in the brood chambers. With regard to Mr. Heap's accusation that I made use of "scientific jargon," your readers will remember that I stated my case without using abstruse scientific terms. I did so purposely, feeling that I was writing to help bee-keepers and not physiologists and scientists.

It comes with bad grace from Mr. Heap to accuse me of darkening counsel by scientific jargon.

He accuses me of laying "claim to fame as a discoverer in a realm in which the

savants of Cambridge are supposed to have failed."

Let me assure Mr. Heap that I have never once spoken of my experiments as a discovery, nor of myself as a discoverer. I merely gave an account of experiments which had cured my bees of "Isle of Wight" disease, and I asked, I hope in all modesty, if any of your readers could be induced to try the remedy which had proved so successful with my own stocks.

I knew nothing of the labours of Cambridge savants in the realm of bee disease. If they have the same mental equipment as the savant of Reading, their failure does not occasion me any surprise.

Mr. Heap considers it an absurdity that I should have apparently drawn an analogy between the bronchial tubes of a human being and the tracheæ of an insect. I confess I did absurdly imagine that the breathing apparatus of an insect as important to the insect as the lungs and bronchial tubes are to the human being. Does the Reading savant mean to tell us that the minuteness of the tracheæ of a bee makes those organs unimportant and negligible? That because of their smallness they cannot be affected by disease?

He tells us with the assurance of one who knows about it that "the seat of the disease is the chyle stomach and intestines."

Are these organs of such magnitude in the bee that Mr. Heap would pardon an analogy such as I have apparently drawn?

No, Mr. Heap, the absurdity is yours. Serious discussion is not in your line. It is easier to ridicule your opponents than to convince the readers of the B.B.J. of your intelligence.

They have not forgotten who it was that declared that the pigmentation of the chitine is the only difference between the Italian and the English black bee. The negro differs from the Englishman by reason of his pigmentation. But is colour really the only difference? A stupid fellow can sometimes pass for a savant so long as he looks grave and keeps his mouth closed. But he gives himself away when he open his mouth and proclaims his ignorance.

Yes, Mr. Heap, I recollect your gentle admonition that I should study the "Psalm of Life"—"Things are not always what they seem."

CONTINENTAL TRIP.

"AFTER THE PUSH."

In traversing ground where one has taken part in the weary waiting and endless monotony of enforced trench habitat, one looks for this and that landmark to find that it is submerged, perhaps, in a gigantic camp of lorries, fodder or ammunition depots. Old roads and paths have disappeared, trenches levelled and unrecognisable by the ceaseless passing of wheels, feet, and hoofs, trees broken and scarred, and missing watering depots, a task in themselves, and heap upon heap of empty cases, all tend to help in the general confusion of those "not in the know." We arrive at a main road covered with various depths of a muddy slurry, that oozes and plashes from the hurrying motors, to take part in an endless stream of vehicles of every description. On one side religiously plod our blue-coated Allies, and on the other our own lads temporarily reign supreme. Here, a strayed mule enjoying a well-earned rest, however dishonestly acquired; there, a horse whose sides resemble the mother-earth, with whom he has apparently had long contact.

We must, however, not get along too fast, or we shall probably be on forbidden ground, and as there are some taking the return journey we will accompany them to the hospitals and places of rest, where, by way of amusements, trips by motor, splendid concert parties, and a delightful change of simple and pleasing food, most that can be done under the circumstances is done to mitigate the hard times and sacrifices our lads have had to make. At some of the hospitals a friendly rivalry is created and encouraged in making regimental badges and crests in many coloured stones and glasses and in the flower borders, which are a feature in every hospital, and I have seen mignonette, geraniums, etc., thriving in nothing apparently but silver sand, but it is awfully tantalising to get right down to the sea after a day or two of travelling to find one is not quite in the ship track; it may be a day even which alters the status of one's injuries or disease.—A. H. HAMSHAR.

KOOTENAY BEE-KEEPERS' ASSOCIATION, B.C.

We have received a copy of the report for 1916 of this association from the secretary-treasurer, Mr. W. J. Sheppard (late Secretary of the Essex B.K.A.). Those who know Mr. Sheppard will not be surprised to hear that the Kootenay B.K.A. is making headway. We make the following extracts from the report. Some of the items are worth considering.

"The season just passed has been a favourable one for the bee-keepers in the Kootenays, there having been a good yield of excellent honey. The outlook in the spring was not very bright, as the bees had wintered badly, mainly owing to the poor quality of the food stored the previous year, combined with an exceptionally prolonged and severe winter.

Sugar being up high in price the bees also suffered on that account in many instances. Very little artificial feeding will be necessary this fall, and the presence of sufficient wholesome natural food in the hives will cause better wintering results to be looked for with stronger colonies at the commencement of next season.

Much could be done by members in improving and extending the sources from which nectar is gathered by the bees, and so increasing the general honey yield, by persuading their friends and neighbours to grow alsike in place of red clover, wherever possible. Fortunately the white, or Dutch clover, our most important honey plant, has become firmly established in the Kootenays, and is spreading everywhere, which will have the effect of increasing our honey crops and making them more certain. When planting shade trees select the European and American lindens and the black locust, all of which yield nectar.

Six thousand one hundred and fifty honey labels have been sold to date, and members are recommended to use these labels as much as possible so as to help to popularise the honey produced, and ensure its sale at fair and uniform prices.

NOTICES TO MEMBERS.

The subscription to the association is $1.00 per annum, due on October 1 of each year. Under Article 5 of the constitution and bylaws no member is entitled to any of the privileges of membership or to vote unles his annual subscription is paid.

The association has now its own staging for honey exhibits at shows, which can be loaned. Honey tiered up on this staging in a good light presents a much more attractive appearance than when placed on a flat table.

Sugar for feeding bees may be obtained through the association at wholesale prices for cash. Current rates and particulars sent by honorary secretary-treasurer on receipt of stamped directed envelope.

The following resolutions have been passed by the association :—

SEPTEMBER 24, 1915.

"Resolved that the minimum prices of wintered over colonies and swarms, on combs, sold by members be $12.50 and $10.00 respectively, at the point of delivery.

SEPTEMBER 28, 1916.

"Resolved that the minimum prices for the sale of honey by members shall be 35 cents per 1lb. jar (net weight) if retailed; $3.25 per dozen if sold to retailers, and $3.00 per dozen to wholesalers." (These prices were arrived at on the basis of the producer obtaining, as near as possible, a minimum net price of 20 cents per lb.

CORRESPONDENCE.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

QUEENS PASSING THROUGH EXCLUDER.

[9372] In answer to Mr. F. Claridge's letter [9367, p. 353]. The reason, I take it, why the best queens are the most likely to pass through distorted wire excluders is because it is the best that will want more laying room. Of course, only small and deformed queens can get through a properly made excluder. The margin between the space of excluder and the space a decent queen will pass through is very narrow; therefore a very slight distortion of wires is sufficient. A fine queen in full lay, rather pinched for room, will try all she knows to get through, whereas a medium queen will often be content where she is. It is the size of the thorax that is the size of the queen, as far as excluder is concerned, and probably the thorax of Mr. Claridge's queens are no larger than those of others.

The nucleus did very well indeed, but if the flow comes at the right time they often do. It is the average of the apiary that one has to go by.—R. B. MANLEY.

KENT BEE-KEEPERS' ASSOCIATION.

[9373] Mr. Judge is quite right in his report of the Crayford and District Bee-keepers' Association in your issue of November 9. I feel distinctly thankful that there is now a prospect of possessing once more a bee-keeping organisation with the old familiar title with the whole area of Kent covered with its members.

An outline is already sketched in the report of the Crayford Association's conference, explaining how the extension is to be made in the county, but what I am at present concerned about is the question of securing members. I would adhere to the Crayford minimum of 2s. 3d. annual subscription, and depend for our full income on those who can afford and are willing to contribute half-guineas or

more. But I am about to obtain a list of existing and likely residents who may become bee-keepers, by asking the head teachers of Kent elementary schools to furnish a list of names and addresses, which will enable us to prosecute a canvass, and, I hope, start active operations in the coming year.—E. D. TILL.

EXPERIENCES WITH "ISLE OF WIGHT" DISEASE.

[9374] I should like to state my experience with "Dioxogen" and "Isle of Wight" disease. I hived a swarm of Italian bees towards the end of May on twelve drawn out standard combs. The swarm appeared to be quite healthy and free from disease. By the third week in June I was disappointed to find hundreds of "crawlers" in front of, and around, the hive. I had just read of Dioxogen as a cure, so I sprayed all the combs, bees and brood with it. The hive was sprayed inside and out with Izal, with the result that there were no more "crawlers," and the bees appeared to have a new lease of life. At the end of July I had a swarm from them that weighed 12lbs. I immediately took 90lbs. of honey from them, gave them two more bars in the brood chamber, made nuclei of the queen cells, and returned the swarm to the same hive.

Altogether I had 210lbs. of honey from that hive this season, and they still have ample store for the winter.

With the rest of my hives I merely sprayed the Dioxogen into the tee holes, as there were no "crawlers" from any of them. I also sprayed the hives of two of my neighbours (free of charge) with best results. This I did partly as a thank-offering for the splendid result in my own case.

Mr. Heap said in one of his letters that he had not used Dioxogen, and as he has promised a letter on it, he is going to talk about a subject of which he evidently knows nothing. When he has tried it and noted the effects his opinion might be worth reading.

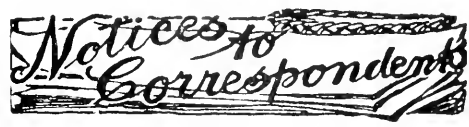
At present his "jottings" are certainly at "random." Nonsensical piffle. I shall be glad when we can get an Act of Parliament that will make a man like Mr. Heap either destroy his bees, or use a cure. As it is, he is just perpetuating the disease. He says he has a cure, and yet has no bees free from "Isle of Wight" disease. It is evidently no good!

The proof of the pudding is in the eating, and the proof of Dioxogen is the results.

Many thanks to Mr. Hollis for so nobly giving to bee-keepers and bee-lovers (not bee-killers) the result of his experience with Dioxogen, and away with this Heap nonsense.—S. A. W. TOMLINSON.

HONEY IMPORTS.

The registered value of honey imported into the United Kingdom during the month of October, 1916, was £12,850.—From a return furnished to the BRITISH BEE JOURNAL by the Statistical Office H.M. Customs.



Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. All questions must be accompanied by the sender's name and address, not necessarily for publication, but as a guarantee of good faith. There is no fee for answering questions.

"BETA" (Dorset).—(1) There is no association. (2) Sorry we do not. (3) Better have the W. B. C. hive, without any complicated parts. You can add the other appliance, if you like, when you have gained experience. You can get it at any appliance dealers. Send to our advertisers for catalogues.

Special Prepaid Advertisements

Two Words One Penny, minimum Sixpence.

Will advertisers please read these Rules carefully in order to save trouble, as they will in future be strictly adhered to.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not permissible at above rate, but will be inserted at* 1d. *per word as* "**Business**" *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of* 3s. *per* ¼*in., or* 5s. *per inch.*

PRIVATE ADVERTISEMENTS are only intended for readers having **Surplus Stock** *to dispose of.* **Driven bees, Nuclei,** *and* **Queens that are reared or imported for sale,** *are Trade Advertisements, and can only be accepted under trade terms.*

Advertisements must reach us NOT LATER than FIRST POST on TUESDAY MORNING for insertion in the "Journal" the same week.

Orders for three or more consecutive insertions in "The Bee Journal" entitle advertisers to one insertion in "The Bee-Keepers' Record" free of charge.

PRIVATE ADVERTISEMENTS.

WANTED, a few Sections of Honey; good price paid.—DOLLIS PARK DAIRY, Church End, Finchley.

WANTED, up to 20lb. of absolutely pure heather or clover honey.—Send price to HOPE, 39, Portland-road, Edgbaston. v 87

BEESWAX wanted; price and sample.—THE APIARY, Penny Long Lane, Derby. v 84

2ST. heather honey, from skeps, 12s. 6d. per st.—MRS. WRIGHT, Pickering. v 86

PURE heather honey, 112lb. 105s.; sample, 4d.; 56lb. pure Cambridge beeswax (light), 1s 8d. per lb; sample 3d.—J. YOUNGER, 29, Newmarket-road, Cambridge. v 89

BY APPOINTMENT.

IZAL

The Modern High-Power Germicide is a reliable remedy against Foul Brood and Isle of Wight disease.

From the B.B.J., July 22, 1915.

IZAL AND "ISLE OF WIGHT" DISEASE.

"I had lost twenty stocks when I tried Izal with my remaining three stocks which were very badly affected . . . The bees are now in very good condition, due solely to the use of this disinfectant."

Sold Everywhere in Bottles, 6d. and 1/- each.

Ask for full details of IZAL Treatment, sent post free by—

NEWTON, CHAMBERS & Co., Ltd., THORNCLIFFE, Nr. Sheffield.

SOFT candy; limited quantity; made of Demerara pure cane sugar, medicated with Bacterol, glass top boxes, 1lb. 9d., 2lb. 1s. 6d.; postage, 3lb. 6d., 7lb. 8d.—999, "BEE JOURNAL" Office, 23, Bedford-street, W.C.

MUST SELL; owner called up.—Six good healthy stocks, in bar frame hives; three bar frame hives; about seventy extracted frames; four crates of sections; extractor; smoker; hat; veil. Inspection; what offers?—BAVERSTOCK, Millway-road, Andover, Hants. v 88

1 CWT. good honey wanted.—Sample and price to FRED TEMPLE, Chemist, Meads, Eastbourne. v 90

BEES.—Advertiser joining Army, has six healthy stocks, Blacks and Hybrids, for immediate disposal, on 8 or 10 combs, with or without hives; best cash offer secures.—CHATWIN, 162, Hagley-road, Birmingham. v 91

COLONIAL HONEY.—LEONARD HALL & CO., 6, Rood-lane, London, E.C., Honey Importers and Packers for H.M. War Dept., the leading Stores, &c.

FOR SALE, young liver and white Spaniel, well trained, and a good worker.—Apply, A. BEACHEN, 2, Bottle-lane, Mansfield, Notts. v 92

WANTED, good heather sections; state quantity and price.—ST. ANN'S CAFE, Manchester. v 77

INCANTO acetylene generator, for lantern, 20s.; in good order.—"DYNAMO," "BRITISH BEE JOURNAL" Office, 23, Bedford-street, Strand, W.C.

EMPTY hives wanted now.—Write, C. PARISH, Addington, Surrey. v 81

FOR SALE, by W. HERROD-HEMPSALL, Old Bedford-road, Luton, Ariel 3½ h.p. Motor Cycle and Side Car, in perfect condition; any trial or expert examination allowed; spares, belt, in leather case, two tubes, one cover, valve spring, back axle; all wheels fitted with Peter Union bands, back to saddle, horn, speedometer, three acetylene lamps, special luggage carrier on side car to carry two gallon can of petrol and one quart oil can, in addition to luggage, kick start, three speeds. Ridden by above, to be sold on account of medical advice; offers.

BUSINESS ADVERTISEMENTS.

COMFORTABLE APARTMENTS for Brother Bee-keepers visiting Douglas. Terms: Tea, bed, and breakfast, 3s. 6d.; or full board, 5s. per day.—HORSLEY'S, Merridale House, top of Castle Drive, Douglas, Isle of Man.

WANTED, half ton pure English honey (in any quantity), cash or deposit account.—Sample to SPECK, South Yardley, Birmingham. v 85

ROWE,
28a, Moy Road, CARDIFF,

SELLS Pure Honeys, Colonial and Californian, &c., carriage paid, tins free; cash. Samples 3d. BUYS Home-produced **Run Honey, Sections, and Beeswax.**

IF YOU WANT GOODS QUICK, SEND TO BURTT,

Bee Appliance Manufacturer, GLOUCESTER.

Have you seen my new Catalogue? If not, you should. Send for it NOW.

A ROLL OF HONOUR.

Although bee-keeping is considered a minor pursuit, we venture to say that it has provided more fighting men than the usual average of any industry. To place on record the part the members of our craft have played in the present war we propose to make a "Roll of Honour," and shall be pleased if our readers will forward us the **Names** and **Addresses**, together with the **Regiment** and **Rank**, of any bee-keeper serving his King and Country at home or abroad; also if killed or wounded.

We print a further list of names to those sent in, and shall be pleased to have other names as soon as possible.

Qr.-Master-Sergt. C. J. Wiltshire, Cardiff.—R.E.

Sergt. A. W. Gunter, Cowbridge.—A.S.C.M.T.

Pte. Sidney Morgan, St. Hilary.—R.E.

Gnr. Sidney Wakeford, Dinas Powis.—R.F.A.

The above are all members of the Glamorgan B.K.A.

BEES TO TEACH THRIFT.

One does not, as a rule, look for anything referring to bee-keeping in papers devoted to commerce or finance. A correspondent, Mr. J. P. Beeson, of Southwell, Notts, has sent us the following cutting from the current issue of the *Bankers' Magazine* thinking it may be of interest to our readers:—

"HOW DOTH THE BUSY BEE ——"

Our staid contemporary, the *Commercial and Financial Chronicle*, of New York, recounts in a recent issue the means taken by Mr. Walter T. Greenebaum, cashier of Greenebaum Sons' Bank and Trust Company, of Chicago, in order to inculcate the necessity for thrift into the American mind. Seventeen thousand working bees, we are told, were installed in the window of the bank's offices in a rural setting, complete with hives, farmhouses, earth, a clover field, and savings banks, while the moral was pointed by three sign posts bearing the following legends:—

"If men were as wise as these little bees there would never be any paupers."

"If these bees had not saved their honey they would be starving now. Are you saving any honey for future use?"

"If you want some honey in later days when honey may be hard to get, start storing a little every day."

As a result, it is stated, several passers-by opened savings accounts. The need for thrift to-day is fully as great in this country as it is in the States, but the structural alterations which would be necessary in the windows of most of our banking institutions, together with the Government's restrictions on such work at the present time, would, we fancy, make the scheme difficult of operation on this side.

SITE FOR AN APIARY.

Would any of our readers advise a fellow bee-keeper as to the best district to set up bee-keeping, if possible to be within easy reach of the sea, and preferably in the counties of Devon, Cornwall, or Somerset, failing them, any other county?

WITH THE BEES AT THE FRONT.

By Ex-Sergt. A. G. Atwell.

(*Continued from page* 272.)

Each time that we took our turn in the trenches, I usually managed to find a few moments to spare to visit some of the apiaries which I had previously found. But what a difference there was at each visit. The few remaining hives and skeps which had marvellously escaped the hurricane of shell-fire got less and less in number until there was scarcely one live bee to be seen in any of these deserted gardens. However, a few weeks later, as the spring advanced, I was pleased to see quite a lot of our little friends busy on the trees and shrubs, which had somewhat escaped the fire of the Huns. Chief among these was the peach, with its lovely pink blossoms, with the gooseberry and currant following closely upon it. These bees, of course, had come from a safer part, back behind the firing line, where the shells had not reached them. It seemed strange to see these little insects busy gathering their stores with our own guns booming all round, and German shells bursting quite near, and which at any moment might burst in the very garden where they were so busy. They seemed, however, to hum a note of defiance as they went steadily on with their work. Many combs were scattered about the gardens from the wrecked hives, but they did not attract many bees. It seemed as though they understood and respected this mass of wreckage—once a flourishing apiary. As I walked back through the skeleton of that which was once a house, I could not help thinking how lucky we bee-keepers really are here in England. Many of us have lost our stocks from "Isle of Wight" disease (I myself have lost the whole of mine), but we still have our hives and appliances for a fresh start, and, above all, we still have

a roof over our heads. In some of my early articles I told how I had endeavoured to fix up frame-hives and skeps which I had found knocked about, and how I hoped that the owners would soon be able to return to them. This was some time ago, but the war still goes on, and I cannot see how any apiaries within the fighting zone can exist at all now. Nothing can remain to mark the places where they once stood but a few scattered pieces of wood, once hives. However, the experiences I had among the bees at the Front during the early days of the war, I shall never forget, and I shall always treasure the many little relics that I was able to bring home with me, some of which I collected at considerable risk.

As I have now reached the end of my story, I can only hope that my efforts to describe my experiences have proved interesting to readers of the Journal. I hope to restart bee-keeping myself again next spring, and I have the consolation of knowing that whatever my misfortunes may be in the future, they can never touch those of the bee-keepers and the bees at the Front.

(*Concluded.*)

A WONDERFUL CITY.

THE LIFE-STORY OF THE HONEY BEE.

By Oliver G. Pike, F.Z.S., F.R.P.S.

(*Continued from page* 359.)

Pliny is very amusing, and in his ancient volume on Natural History there are many very comical things. It is full of a mixture of truth and imagination blended together in a quaint way. He says that the bee may easily be outwitted, for he recommends the top of the hive to be made movable, and, although no doubt a very rough method, this seems to be only another way of enlarging or lessening the interior of the hive as practised in modern times. "If the hive be large," he says, "and the bees despairing ever to fill the same, it should be let down to make their hive seem the less, and must be gently drawn up again by little and little, that the bees may be deceived thereby, and not perceive how their work grows upon them."

The Romans used talc, a kind of glass, or transparent stone, so that the bees could be seen at work—again a rough forerunner of our splendid observatory hives.

Pliny thought that if bees were caught in a storm they took in, or rather took on, ballast, wherewith to help them through the troublesome winds:—"If haply there do arise a tempest or a storm whiles they are abroad, they catch up some little stony grit to balance and poise themselves against the wind. Some say that they take it and lay it upon their shoulders." What I admire about Pliny is that he often prefixes or ends these curious passages with such expressions as "some say" or "but this I believe not."

The honey-bee in Pliny's time was evidently more sympathetic to its sick sisters than it is to-day, for he tells us that "bees naturally are many times sick; a man shall see it in them by their heavy looks, and by their faintness in their business; ye shall mark how some will bring forth others that be sick and diseased into the warm sun, and be ready to minister unto them and give them meat. Nay, ye shall have them to carry forth their dead, and to accompany the corpse full decently, as in a solemn funeral!"

There is a large insect, the death's head moth, which is a great enemy of bees, and it enters the hives at night and takes away all the honey it can devour. In this country, fortunately, it is rare, but on the Continent it is found in greater numbers. When this moth enters the hive it often utters a shrill squeak, and this has the effect of frightening or paralysing the bees. Pliny is evidently referring to this moth when he tells us that "butterflies may be enticed out of the hive at night by placing a light before it, when they will come to fly into the flame." Or perhaps he is referring to the wax-moth, a little creature that deposits its eggs on the wax-combs. These, when they hatch, produce caterpillars that sometimes work such havoc in the hive that the bees desert their home. This same amusing author tells us that if bees remain out at night too late to return home, they will go to sleep on their backs: "If they be overtaken by the night, they couch upon their backs, for fear lest their wings be overcharged with the evening dew." Observers of Nature must have often seen the big heavy bumble-bee lying on its back in a half-drunken state, owing to a too liberal feast of the nectar in the blossom of the thistle, and I expect that it was one of these that Pliny observed when he jumped to the conclusion, that the struggling creature was commencing to make itself comfortable for the night owing to the shades of evening having overtaken it on its way to the nest.

Pliny also noticed the tumult that ensues if the queen should be lost, for he writes: "If it chance that the king be dead of some pestilent malady, the commons and subjects mourn; they take thought and grieve with heavy cheer and sad countenance; idle they be, and take no joy to do anything; they gather in no provision; they march not forth, only with a certain doleful humming they gather round about his corpse, and will not

away. Then requisite it is, and necessary, to sever and part the multitude, and so take away the body from them, otherwise they would be a-looking at the breathless carcase and never go from it, but still moan and mourn without end."

To quote Pliny again: "When they be in march, each one desires and strives to be near the prince. If he begins to be weary, they support him with their shoulders; if he be tired indeed, and faint outright, they carry him full and whole." And again: "They mark and note the slow-backs, they chastise them anon; yea, and afterwards punish them with death." This old writer must have noticed the drones being cast out in the autumn, and again he drew conclusions, for "if any drudgery or such like business is to be done, out are they (the drones) sent first; make they but slow haste in that, they are set about; sure they are to pay for it, and be punished without mercy." Where he got the following idea from I cannot imagine: "If we pluck off the wings from a drone, and put him again within the hive, he will never cease until he hath done the like by all the rest of the same kind."

Pliny mentions poisonous honey which is yielded by certain plants. We have heard the story which Xenophon relates in his account of the far-famed retreat of the ten thousand Greeks. When they reached a certain place—Trebizond—they discovered a good supply of honey. They partook freely of this, and it produced in some a kind of intoxication; while in others, insanity. Pliny mentions honey which was found at Pontus: "Which because it driveth folk into a fit of rage and madness they call in Greek, Maenomenon. Moreover, in the kingdom of Persis, there be venomous honey-combs; yea, you shall have in one hive, some full of poisoned honey, others sound and good; a dangerous thing, no doubt, and than which there could be no greater deceit. What should we think was Nature's meaning and intent by these secret sleights and hidden mischiefs? Certes I am of this mind and belief verily, that she had no other purpose herein than to make men more wary what they eat, and less greedy of sweetmeats, to content and please the tooth." Then he very kindly and thoughtfully gives us an antidote or "one good receipe" to prevent any ill-effects following. Here it is: "Item; each much of salt fish, although it come up again."

This curious old naturalist has a lot to say about honey. "Be it what it will, either a certain sweat of the skies, or some unctuous jelly proceeding from the stars, or rather a liquor perged from the air when it purifieth itself, would that we had it so pure, so clear, and so natural as when it descendeth first; notwithstanding all the impurities it contracts in passing through space and being corrupted of the flowers and gathered up in the bees' little bellies, and soaking within the hives, for all the sorrow, a great resemblance it carrieth still with it of a most pleasant, sweet and celestial liquor."

This same quaint naturalist waxes very eloquent over the temporary removal of bees for change of air: "I will tell you of a wonderful and memorable thing upon mine own knowledge. There is a town or burgade called Hostilia, situate upon the River Po. The inhabitants of this village when they see that their bees meat goeth low thereabout, and is like to fail, take their hives with bees and all, and set them in certain boats or barges, and in the night row up the said River Po against the stream five miles forward. The morrow morning out go the bees to seek food and relief. Now when they have met with meat, and fed themselves, they return again to the vessels aforesaid, and this they continue daily, although they change their place and haunt, until such time as their masters perceive that the hives be full by the settling of their boats low within the water with their weight."

I will quote just one more of Pliny's writings; he evidently thought that bees liked fair dealing for: "When men take the honey forth from the hives they used to weigh the combs, and so by weight dispense and set out how much they will leave them for their food; having this opinion, that they are bound to deal in justice and equity even with the very bees; insomuch as it is commonly said, if they be defrauded of their due in this society, and part taking, and find falsehood in fellowship, they will die for grief. Contrarywise if you leave them too much, plenty breeds idleness."

To come to more modern times, the following two charms are interesting, for they have been handed down to us from our Saxon ancestors. I quote from "Wort Cunning and Starcraft of Early England." "A charm for catching a swarm of bees: —Take some earth, throw it with thy right hand under thy right foot, and say: I take under foot, I am trying what earth avails for everything in the world, and against spite and against malace, and against the wicked tongue of man, and against displeasure. Then throw over the bees some gravel when they swarm, and say:

'Sit ye my ladies, sink,
Sink ye to earth down;
Never be so wild
As to the wood to fly.
Be ye as mindful of my good as every man is of meat and estate.'"

The second charm is to prevent loss of bees: "A plant of madder on thy hive,

then no man will be able to steal them the while the plant is on the hive."

The throwing of gravel over a swarm is a very ancient custom, and it certainly has the effect of hastening them to cluster, although a fine spray of water is far better. An old Greek writer tells us that we can bring home a swarm by "gathering the dust from where a snake hath made a track. Fling the same upon a swarm of bees; they shall return again to their hive." It would be difficult, I am thinking, to discover a snake's track at a short notice, especially during the excitement of a swarm. Some of these old customs are still practised in the country villages, and I have actually seen a few of these strange ideas put into use. When I commenced bee-keeping I had a plant given me by a cottage bee-keeper, and I was told to care for and tend this very carefully, for unless I brushed the inside of the hives with the leaves of this plant, the bees would not stay in their new homes. It is an old custom to smear the inside of a hive with beer and sugar before placing a swarm in it. This has no effect on the bees, with the exception of making a certain number hopelessly drunk, and quite incapable of leaving the hive. It is supposed to induce them to remain in their new quarters, but more often would have the effect of driving the majority out.

There is an interesting old custom prevalent in the West of England. When the owner of some hives dies, it is said that the bees will all die also unless they are all put in mourning. On such an occasion a small piece of black material is placed on each hive, and a stone, sufficiently heavy to prevent the wind blowing it away, is placed on each square of black. I have actually seen this in a West Country village, and I was assured, unless this had been done, all the bees would have perished soon after the death of the owner. It seems strange that well-educated people in some villages that I know still believe in these ancient superstitions. It would be interesting if it were possible to ascertain the origin of this and many other remarkable things that I have come across during my travels in this country. However uncouth and curious these may seem to us the country folk believe in them implicitly, and one is only laughed at and considered ignorant if an attempt is made to show them their folly.

It will be seen by the foregoing that the honey-bee, like many other insects and animals which are associated with man, has its fair share of superstition attached to it, but we must remember old writers lived in the superstitious times, and they did not have the advantages that modern hives offer for observation and discovery.

(To be continued.)

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

MAKING MEAD.

[9375] In taking up the B.B.J. of November 9, I noticed on p. 355 [9054] a correspondent asking for a recipe for making mead. Now, as I am an old hand at making honey mead I here give you my plan of making this valuable beverage. Mead making is a practice that has about fallen out of use, and I am surprised at bee-keepers allowing it to do so. It is a most important part of the bees' product, and is the most health-producing beverage that is made. Here I quote the remarks of the late Dr. Pirkins, of Snaith, who often called to see my bees, and when I had a drop of good mead on hand I usually gave him a small tot, and on one occasion he asked me what I called it. My reply was: "Honey mead, Doctor." He said, "Do you know what I call it?" I said, "No." "Well, I call it the essence of flowers," he said; "I can feel it go from the crown of my head to the soles of my feet"; and his remark was: "If you keep taking this drink you will never want any of my physic."

Now for my procedure in making it. I use honey from straw skeps for the purpose of making mead. I keep them for swarming and mead making, and the older they are the better the mead. I usually keep them until they are four or five years old; the older and blacker the combs are the better. When I have done extracting from the bar-frame hive, and everything is washed, I put the washing water into a tub which I keep for the purpose, then I get the contents of the skeps. I just keep the best of the honey from the skeps, and all the rest goes into the tub. I only cut the portion of comb which contains brood; the more pollen you have the better and stronger is the mead. Then I add more water, and let all stand in the tub about a week. I break up the combs, and stir about with a stick, which I have for the purpose, two or three times every day, then strain through a fine sieve into another tub, and

let it stand, say, about twelve hours, then pour gently into a copper leaving all the sediment at the bottom. If the liquor is too sweet I add a little more water, and put in a few cloves, about six lemons, ginger according to quantity of liquor, and boil nice and steady for an hour, then pour into the tub to cool and settle, it is then poured out into another tub, as there is a quantity of sediment after boiling, then when the liquor is lukewarm I add a little brewhouse yeast, and let it ferment about twenty-four hours, taking off the scum from time to time. It is then put into a cask and allowed to ferment out of the bunghole. I take care and keep a little liquor to keep filling up the cask, as it will require filling up from time to time for about a week. I then bung and let it stand, say, for two or three months, then bottle, and it will keep for years. Good mead should be the colour of rum.

Now I have a drop of this year's mead on hand, and should any B.B.J. reader give me a call I shall be most pleased to have a little chat, and sample my mead.—One of the old school, E. J. THOMPSON.

QUEENS PASSING THROUGH EXCLUDERS.

[9376] While thanking Mr. Manley for his kindly explanation [No. 9372] may I point out a discrepancy in his wording which, while no doubt quite unintentional, is a little misleading. In his letter No. 9364 he makes no mention of the "distorted wire" referred to in No. 9372. Had he done so I should have had no need to ask the question I did—as every bee-keeper knows that a queen is likely to go through an excluder if it is distorted at all. At any rate, he runs the risk.

With regard to the size of my own queens, I am inclined to think the mother-queen I mentioned in previous letters is of Carniolan strain, but am not expert enough to be sure. The stock is very mild-tempered and can often be handled without smoke.

One little incident in relation to this same stock, which I omitted to relate in my season's report, may be of slight interest to other novices.

I began manipulations about the middle of March, and slow-feeding at about March 10. On April 4 I went to borrow a frame of brood for the second stock which was rather backward, having suffered severely from "Isle of Wight" disease during the winter. I had removed the comb of sealed brood, when, to my great astonishment and consternation, I found two prime queen cells on the next comb!

I had evidently either crushed the old queen in previous manipulations, or else the bees had balled her during the excitement of first opening up. I did not again disturb them till April 21, when I found both cells were down, and pollen was going in abundantly. I did not look for eggs, as weather was none too warm, but supered with one rack of sections without an excluder between. I know better now.

I changed hives for a clean disinfected one on May 4, found the young queen, and brood in six combs—and in the sections also. One thing here puzzled me—and at the same time goes to disprove an old theory to the effect that young queens are not so likely to breed drones in their first season. The brood in about eight or ten sections was all drone brood, notwithstanding *all* the sections were supplied with *full sheets* of extra thin super, *worker base*, and the young queen was not a month old. She eventually swarmed on June 20, and the swarm filled a 10-frame hive. I did not weigh it, not having the means handy, but they had worked out all the ten combs in three days, and two sets of shallow combs as well in eighteen days from swarming, giving me eventually 125lbs. surplus.

What most surprised me was the very early raised queen and her early mating. I hardly expected her to get mated so early, but apparently there were some drones around, but not from my stocks, I feel sure.

I should like to hear if any brother bee-keeper has had a similar experience. I shall certainly know a little bit more for next season's operations.—FREDERICK M. CLARIDGE.

[9377] Having seen in the number of B.B.J. for November 2 an article "Queens Passing Through Excluders," I use excluders, but have noticed that in some of my hives the queen passes through them, and breeds in the upper combs. What I do is to pass the frames to the body of the hive as soon as they are full. My opinion is that some queens are smaller in these hives, and that the excluders are made for excluding bigger queens, as some queens do not pass in the other hives. I use zinc excluders, French make, I think. Is there some way to prevent this? — JORGE D'ALMEIDA LIMA, Lisbon.

[If the excluders are correctly made, the only thing is to replace the small queens by larger ones.—EDS.]

ITALIAN BEES AND "ISLE OF WIGHT" DISEASE.

[9378] I was very pleased to see in your issue of the 16th instant a letter from my friend, Pte. J. E. Lockwood, of the Egyptian Expeditionary Force. Pte.

Lockwood, in the spring of 1915, kindly offered me four stocks of his bees, two of which were Italians headed with young queens. He informed me that the bees were wintered on badly infected combs from stocks which had died from "Isle of Wight" disease. I had unfortunately lost all my stocks with the same disease, and when Mr. Lockwood suggested that I might use the infected combs when building up the stocks he gave me, I felt sure his bees would die out also. Two of the stocks did die, but these were not Italians. One day in May, 1915, I found one hive of eight combs packed with bees, brood, and eggs in all stages, and greatly overcrowded. I immediately filled the hive to ten combs (still using the infected ones), and placed a rack of shallow frames over the brood nest, and allowed the queen to oviposit in twenty combs. This stock did not swarm. After I had taken from this hive three racks of shallow frames full of honey, and sealed over, there still remained the twenty combs, many of which were also full of honey. A skep headed by a young Italian queen swarmed. This swarm placed on twelve infected combs gave me four racks of shallow frames full of honey. I also had from the skep two casts, one of which I lost. The other I put on infected combs, and this became a splendid stock.

The original skep placed over twelve infected combs survived the winter, and I transferred it this spring—1916. This stock gave me two swarms, and I made three nuclei, one of which I sold, one I gave to a friend, and one I kept myself. All these stocks are still alive. These bees have survived three winters, and have not yet succumbed to "Isle of Wight" disease. Surely, there must be something in this strain of bee akin to immunity.

It is rather interesting to know that one of the nuclei of four combs I sold built up into a good stock, and filled about 40 sections of honey. The other nuclei gathered about 20lbs. each. I have now six stocks of the Italian strain, and two of a pure strain, and they all seem very healthy at present, although built up on infected combs.

If any of my stocks die during the coming winter, or spring, it will be only fair and just to let you know. I have had the pleasure of visiting this summer apiaries of the famous Dutch bees at Bures, in Suffolk, and through the kindness of the manager, I was able to see the conditions under which such bees are kept. They were very vigorous and healthy, and certainly seemed to have a strain of the Italian breed about them.

I hope, Mr. Editor, I have not trespassed too much on your valuable space in my description of and experience with Italian bees, but I thought the matter might be of interest to you and also to your numerous readers.—THOMAS WELLS, Colchester.

THE PAUCITY OF WASPS DURING THE PAST SUMMER.

[8379] We bee-keepers are particularly interested in the prevalence, or otherwise, of the various members of the Vespidæ family, yet we are none too well informed as to the factors which govern their destiny. Wasps are enemies of the honey-bee, and it therefore follows that they are enemies of the bee-keeper also, who, as a rule, takes all possible means to secure their destruction without giving a thought to their functions in life.

During the summer of 1915 there was a veritable plague of them in Kent, and I believe from reports that it was general throughout the country. Not only bee-keepers suffered, but fruit-growers experienced much loss owing to their depredations. As might have been expected there were innumerable queens to be seen during the spring, but for some reason their progeny failed to materialise to any extent, and I am certain that I observed more queens than workers this year. This fact suggests two questions to my mind :—

What is the cause of the dearth of workers?

What effect is it likely to have on insect pests next year?

I know that bad weather is often given as the reason for the scarcity, and there seems to be little doubt that it is the chief factor, but are its effects direct or indirect? From my limited study of wasps I have found them capable of withstanding a good deal of cold weather, and I am inclined to the belief that their destruction is attributable more to starvation than any other cause. Their habits do not permit them to store their food as do bees, and consequently if a spell of cold wet weather intervenes at the time the queens commence breeding it must be difficult for them to provide the necessary sustenance.

In *Nature*, October 26th issue, a number of correspondents have recorded their observations, and it would appear that the scarcity is more or less general throughout the country. Mr. Walker, Ulcombe, Kent, suggests that many of the queens observed this spring were probably infertile. If that be so we have to look further back for the cause of their infertility, but even so I would have imagined that the race being subject to the laws of parthenogenesis, drones would have been produced early in the year. This theory could be proved by microscopical examination of a proportion of the queens to be found in the spring, and

the results compared with the prevalence of workers later in the season.

It may be that some members of the bee-keeping fraternity can throw light on the subject.—GEORGE W. JUDGE.

EXPERIENCE WITH "ISLE OF WIGHT" DISEASE.

[9380] Your B.B.J. is a splendid instructor to a raw novice in bee-keeping like myself. I am very much interested in the discussion upon "Isle of Wight" disease. May I add my testimony to others? I would like to say I am a new beginner, with everything to learn.

In July I obtained my first swarms, and I had no sooner got them settled than a friend, who is quite an expert, condemned them as victims of the fell disease. He pointed out to me lots of crawlers, hundreds of corpses, and a quantity of excrement about. He also sent half a dozen "dead-'uns" to your good selves for confirmation, and your verdict was very emphatic, and advising the destruction of bees and contents of hives. By this time I myself had caught the bee-keepers' fever, and was loath to lose my poor bees. I had also the loan of a copy of the BRITISH BEE-KEEPERS' JOURNAL, and saw Izal recommended. This I obtained, and with a greenhouse syringe I soused the bees from the top of the combs, and also the floor of the hive, and I feared I had drowned the poor things, but, to my great joy, in a few days all signs of sickness had disappeared, the bees became very vigorous, and have kept so ever since. Now I have two strong stocks, well supplied for winter with their own gathered stores. Whatever anyone may say to the contrary, "Isle of Wight" diseases is curable, and that by a very simple process.—AMATEUR.

AROMATIC CHALK POWDER FOR "ISLE OF WIGHT" DISEASE.

[9381] As "the other cleric who suggested aromatic chalk powder as a remedy" for "Isle of Wight" disease, I am writing to say that it was suggested to me by a medical man who had heard of my success with the pea flour, and said that aromatic chalk powder is prescribed for diarrhœa, etc. Mr. Heap might learn to be a little less discourteous even to those clerics who are doing what they can to find out remedies for the disease by experiments. We have to thank Mr. Hollis for his help in this matter, and think it very discreditable to Mr. Heap to still continue his obstinate opposition to those who are seeking the much-needed remedy.—HERBERT NEWMAN.

Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. All questions must be accompanied by the sender's name and address, not necessarily for publication, but as a guarantee of good faith. There is no fee for answering questions.

NORFOLK BEE-KEEPER (Norfolk).—*Treatment for "Isle of Wight" Disease.*—You can do very little at this season. If any candy is given it should be medicated. Keep the hives supplied with Apicure and Naphthaline, and see that they are free from damp.

ROSE (Kent).—*Composition of Loaf Sugar.*—It may be either cane or from other sources, none of which are so suitable for bees as pure cane sugar. (2) Sorry we cannot. (3) Natives, Browns and Blacks all mean the same thing. (4) Eynsford, Kent. (5) Mr. G. W. Judge, Barrowdene, Shepherd's Lane, Dartford.

AMATEUR (Malvern).—*Comb or Extracted Honey.*—Extracted honey is the easiest to produce. Work for that for which you have the best and readiest sale.

Full Sheets of Foundation or Starters.—Yes, it is better to use full sheets.

Paint Inside Hives.—It is not necessary, and is usually only done after an attack of disease. You would have to place the combs and bees in another hive, a makeshift would do.

Three Colonies from Two.—Your plan would probably work if the bees from two more combs from each hive were also shaken in, as almost all the old bees will return to their old home. A better plan is that given on page 94 of the "British Bee-keeper's Guide Book."

Removing Stocks to New Site.—This may be done any time when the bees have been unable to leave the hive for about a week on account of wet and cold. Do not close the entrances afterwards.

Special Prepaid Advertisements

Two Words One Penny, minimum Sixpence.

Will advertisers please read these Rules carefully in order to save trouble, as they will in future be strictly adhered to.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not permissible at above rate, but will be inserted at* 1d. *per word as* **"Business"** *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of* 3s. *per* ¼*in., or* 5s. *per inch.*

PRIVATE ADVERTISEMENTS are only intended for readers having **Surplus Stock** *to dispose of.* **Driven bees, Nuclei,** *and* **Queens that are reared or imported for sale,** *are Trade Advertisements, and can only be accepted under trade terms.*

Advertisements must reach us NOT LATER than FIRST POST on TUESDAY MORNING for insertion in the "Journal" the same week.

Orders for three or more consecutive insertions in "The Bee Journal" entitle advertisers to one insertion in "The Bee-Keepers' Record" free of charge.

PRIVATE ADVERTISEMENTS.

FOUR grand Black Minorcas, cockerels, Cooks' strain, 7s. 6d. each.—A. E. WARREN, Simpson, Bletchley.

BY APPOINTMENT.

IZAL

The Modern High-Power Germicide is a reliable remedy against Foul Brood and Isle of Wight disease.

From the B.B.J., July 22, 1915.

IZAL AND "ISLE OF WIGHT" DISEASE.

"I had lost twenty stocks when I tried Izal with my remaining three stocks which were very badly affected . . . The bees are now in very good condition, due solely to the use of this disinfectant."

Sold Everywhere in Bottles, 6d. and 1/- each.

Ask for full details of IZAL Treatment, sent post free by—

NEWTON, CHAMBERS & Co., Ltd., THORNCLIFFE, Nr. Sheffield.

WANTED, good sections.—A. E. WARREN, Simpson, Bletchley.

INCANTO Acetylene Generator for lantern; in good order; partly made of copper, 20s.—"DYNAMO," "BRITISH BEE JOURNAL" Office, 23, Bedford-street, Strand, W.C.

EXTRACTOR, geared 21s.; exchange for 60lbs. honey.—MILNER, Hook, Goole, Yorkshire. v 93

5 CWT. finest light honey, 56lbs. tin, f.o.r., £5 5s. cwt.; sample 4d.—C. SPRATT, Meadow Farm, Wetheringsett, Stowmarket, Suffolk. v 94

WHITE Leghorn Pullets. April hatched, near laying, splendid birds, 5s. each; owner joining up.—HALL, Highfield Lodge, Newark, Notts. v 95

SOFT candy; limited quantity; made of Demerara pure cane sugar, medicated with Bacterol, glass top boxes, 1lb. 9d., 2lb. 1s. 6d.; postage, 3lb. 6d., 7lb. 8d.—999, "BEE JOURNAL" Office, 23, Bedford-street, W.C.

FOR SALE, young liver and white Spaniel, well trained, and a good worker.—Apply, A. BEACHER, 2, Bottle-lane, Mansfield, Notts v 92

EMPTY hives wanted now.—Write, C. PARISH, Addington, Surrey. v 81

FOR SALE, by W. HERROD-HEMPSALL, Old Bedford-road, Luton, Ariel 3½ h.p. Motor Cycle and Side Car, in perfect condition; any trial or expert examination allowed; spares, belt, in leather case, two tubes, one cover, valve spring, back axle; all wheels fitted with Peter Union bands, back to saddle, horn, speedometer, three acetylene lamps, special luggage carrier on side car to carry two gallon can of petrol and one quart oil can, in addition to luggage, kick start, three speeds. Ridden by above, to be sold on account of medical advice; offers.

BUSINESS ADVERTISEMENTS.

COMFORTABLE APARTMENTS for Brother Bee-keepers visiting Douglas. Terms: Tea, bed, and breakfast, 3s. 6d.; or full board, 5s. per day.—HORSLEY'S, Merridale House, top of Castle Drive, Douglas, Isle of Man.

COLONIAL HONEY.—LEONARD HALL & CO., 6, Rood-lane, London, E.C., Honey Importers and Packers for H.M. War Dept., the leading Stores, &c.

ROWE,

28a, Moy Road, CARDIFF,

SELLS Pure Honeys, Colonial and Californian, &c., carriage paid, tins free; cash. Samples 3d. BUYS Home-produced **Run Honey, Sections, and Beeswax.**

IF YOU WANT GOODS QUICK, SEND TO BURTT,

Bee Appliance Manufacturer, GLOUCESTER.

Have you seen my new Catalogue? If not, you should. Send for it NOW.

A ROLL OF HONOUR.

Although bee-keeping is considered a minor pursuit, we venture to say that it has provided more fighting men than the usual average of any industry. To place on record the part the members of our craft have played in the present war we propose to make a "Roll of Honour," and shall be pleased if our readers will forward us the **Names** and **Addresses**, together with the **Regiment** and **Rank**, of any bee-keeper serving his King and Country at home or abroad; also if killed or wounded.

We print a further list of names to those sent in, and shall be pleased to have other names as soon as possible.

Pte. W. Shuker, Middleton Scriven, Bridgnorth.—A.O.C.

BRITISH BEE-KEEPERS' ASSOCIATION.

HONEY FOR THE LONDON HOSPITAL.

The Council of the British Bee-Keepers' Association are anxious to obtain gifts of honey for the wounded soldiers in the London Hospital, where it is urgently needed both for food and medicinal purposes. They will, therefore, be grateful for gifts of same, no matter how small, from bee-keepers throughout the British Islands. It is unnecessary to explain our obligations to these brave fellows, who have sacrificed health and limbs for the sake of our country. Gifts should be sent addressed to the Secretary, B.B.K.A., 23, Bedford Street, Strand. The donors' names will be published in the "B.B.J." and RECORD.

W. HERROD-HEMPSALL,
Secretary.

Amount already received ... 288½ lbs.

KOOTENAY B.K.A., BRITISH COLUMBIA.

ANNUAL MEETING.

The second annual meeting of the Kootenay Bee-keepers' Association was held at the Board of Trade Rooms, Nelson, on September 28, 1916, at which there was a representative attendance of members. At the commencement of the proceedings Mr. J. J. Campbell, Willow Point, was voted chairman pro tem., pending the arrival of the President, Major-General Lord Aylmer, who came in on the boat from Queen's Bay on purpose to attend the meeting. The report and balance sheet were unanimously adopted, after which the officers for the ensuing year were elected. The Association has now eighty-five members. It is in a flourishing condition, and much has been done since its inception in 1914 in organising the bee-keeping industry in the Kootenays and placing it on a permanent and sound basis. The officers for 1917 are:—Honorary President, Wm. E. Scott, Deputy Minister of Agriculture, Victoria. President, Major-General Lord Aylmer, Queen's Bay. Vice-President, B. Lockwood, Nelson. Honorary Secretary-Treasurer, W. J. Sheppard, Nelson. Auditor, John Fraser, Nelson. Executive Committee, E. Alpaugh, Kaslo; G. F. Attree, Queen's Bay; J. Blinco, Creston; Gordon R. Brown, Robson; J. J. Campbell, Willow Point; Mrs. Casler, Nelson; H. W. Collins, Grand Forks; G. Fleming, Nelson; E. W. Frink, Appledale; T. S. Gill, Cranbrook; J. Hyslop, Nelson; James Johnstone, Nelson; C. G. Johnson, Nelson; W. J. Mohr, Nelson; A. E. Pittaway, Castlegar; R. E. Plewman, Rossland; W. H. Rixen, Nelson; W. Romain, Nelson; J. E. Vestrup, Nakusp; A. E. Watts, Wattsburg.

A DAY WITH A CAMERA ON THE COTSWOLDS.

How pleasant are the Cotswolds in the sunshine of November!

Dulness and driving storms are so frequent that we are glad on a bright day to sally out and enjoy the mellow sunshine while it lasts.

The sunlight has little warmth in it, yet the atmosphere is tempered and soft, and yesterday's dew still glistens on the broader greyer blades of the hedgerow grass.

On the leeward side of a plantation sheltered from the breeze one can enjoy its rays, and admire the gorgeous hues of the autumn leaves that still remain, as if loath to drop and be swept by the wind into the hedge bottoms.

Some trees have yet a trace of their summer greenery upon them, while others are quite bare, their gaunt, dark limbs standing out in contrast to the whiteness of the mid-day sky.

The thorn bushes, bare except for their brilliant red berries, as also those of the wild rose glisten in the sunshine, and through them you can see all sorts of pretty nooks and views hidden in the summer, and they let daylight into the haunts of wild life in the woods.

With a camera in hand a day on the Wolds can be pleasantly spent at this period of the year. From the "Garden

Town" it is a run of about eight miles uphill before the rolling downs are reached, and you can see the white road stretching on and on until it fades in the distance.

The triangular stretch of country between Andoversford, Naunton and Turkdean is rich in pastoral views of every kind, as some may know.

And Andoversford, where the main roads meet, is pretty itself, as the picture taken above it will show.

Between the villages the open country is relieved by bright splashes of colour afforded by the russet tinted spinneys, farmsteads with their adjoining rickyards; the old-fashioned slated barns open to the roadside, and the greyness of the stubble contrasts vividly to the deep rich brown lines of a field under the plough.

The turnip fields with their bright yellow patches of charlock blossom are conspicuous among the undulating meadows and bare ridges in the distance.

The road winds past an ivy-crowned pike-house, up and under the railway arch at Hampen Hill, which is precipitous in places, and owes its name to a quaint hamlet set among trees on the hillside a few furlongs away.

The absence of much traffic makes the rabbits and hares quite bold, and they venture far into the open. The plaintive bleating of sheep comes through a wayside

ANDOVERSFORD FROM THE HILLSIDE.

A TYPICAL SCENE ON THE DOWNS. SHEEP BEING "FOLDED OFF" ON CLOVER.

thicket, and from behind a corn-stack one can get a picture of the flock being "folded off" in a clover stretch.

It is interesting to chat with an old Cotswold shepherd, who has been with the flocks from his boyhood up.

His quaint vernacular is strange to one who dwells in a town. His store of knowledge is wonderful; and as a weather prophet his predictions are rarely far wrong.

Further along the road a slight dip shows a church-spire peeping from between the trees, and we are soon down the narrow lane leading to the village.

And nothing is prettier than to view it from the hillside in the fading November sunlight. The peacefulness of the scene is indescribable.

A walk down the street brings one to the village-cross and pump; some thatched cottages under whose wide eaves can be seen a row of bee-skeps protected by earthenware pans; and the stream crossed by a rough wooden bridge.

The village church, crumbling in places with age, in its little churchyard, about which ivy trails in masses, bears eloquent testimony to the days gone by.

Too often they have a neglected appearance, and appear deserted; as, indeed, do many of the hamlets drained of their manhood by the war, and the men seen in the fields are chiefly old inhabitants of the village.

A slight chilliness in the air reminds us that the best of the day has passed, and so with a last gaze at the village and its surroundings, we retrace our steps to the high road.

A call at an out-apiary to see that all is in order, and then away for home as the last rays of the sun strike a path of gold along the bare hills, and the mist of evening hides from view the distant woods.

The day has been enjoyably spent, and we can return to the warmth of the fireside with as much pleasure as we met the beauty of the morning on our outward journey. A. H. Bowen, Cheltenham.

ANCIENT BEE LITERATURE.

XI.—BEES IN THE FAR EAST.

From Hindu literature we learn that bees were considered, to quote Roman Varro, "Birds of the Muses"; and that their sweet produce was highly esteemed as Madhu, "divine honey." It was a con-

PART OF AN OUT-APIARY IN THE SAINFOIN DISTRICT.

firmed belief with these Eastern peoples that honey gave strength, wealth, good-fortune, knowledge, wisdom, and offspring to man. Their great god, Vishnu, had as one of his numerous names one meaning "honey-born," and he is sometimes represented as a bee, lying in a lotus flower. Kama, the God of Love, is spoken of as being aided by bees in carrying out his interesting duties, while his bow is shown strung by a chain of bees.

The two Aswins, children of the sun and moon, demi-gods who made it one of their duties to look after mankind, conveyed to them gifts of honey in their three-

wheeled car. "May the three-wheeled car of the Aswins, drawn by swift horses, laden with honey, come to our presence and bring prosperity to our people," saith one of the Vedas; and further we are instructed as to the benefits these gifts bestow. "Bring us, Aswins, vigour, animate us with your honied speech, prolong our existence, wipe away our sins, destroy our foes, be ever our associates." "Aswins, your bounty-shedding chariots refresh us with trickling honey, the fellies of your honey-laden car drop honey."

In the Sutras, the aphoristic literature of the Hindus, we read much about honey and the bee. Short, pithy, but at times cabalistic sayings show plainly how important a part was played in these Eastern lands by this God-given sweet, and how it concerned mankind from the cradle to the grave—and even beyond it. In their birth feasts, the father lightly touched the tongue and lips of the new-born child saying—"I administer to thee honey. Long may ye live, protected by the gods." Again, at baptism, or its equivalent, by the command of the Sutras, he administered a mixture of honey, butter, and milk on giving the child its name. When the first solid food was given it was mixed with milk and honey, the parent repeating—"Ye holy ones, ye honied ones, mix milk with honey for the obtaining of wealth."

At the age of puberty the young man for a time took on him a vow not to eat of honey; but later, when he desired to set up a house of his own, and enter into double blessedness, we hear of "streams of honey," and he prays that "divine honey" may bring him wealth and numerous offspring. In his new home honey is always present to welcome the coming, to speed the departing guest. He, in the marriage ceremony, kisses his wife saying—"Honey, my tongue's speech is honey, in my mouth dwells the honey of the bee."

Also, as we have seen in Western lands, so in the East, honey figures in feasts and ceremonies connected with death. And, too, their great gods had to be propitiated by offerings and gifts of honey.

It is, however, in the poetry of the East, that we find the most laudatory tributes paid to bees, their honey, and the fair flowers from which the busy insects glean not only their staff of life but also those superfluous stores of luscious nectar they collect to bless mankind. Their poets love the bees and the flowers. "Flowers whose fragrant lips attract the kiss of bees, that softly murmur through the summer hours." Three of these fair flowers in particular have their praises rapturously sung by Eastern poets—the lily, the lotus, and the mango. The last seems to be the favourite of love and the darling of the bees. "Here and there the wandering bee may rest; He loves his own, his darling mango best." Yielding honey and pollen bounteously, they delighted to feast amid the wealth of mango blossoms:—

"It powders its fine red on many a bee
That sips the oozing nectar rapturously."

"The bee doth sip
Voluptuous nectar from its lip."

"The bee circles round the flower whose nectared cup teems with the dew of morning."

"How beautiful is the lotus while bees murmur 'midst its petals. The bees crowd about them in heaps, and with sweet, inebriate murmuring low soft music lend."

"The bees, their store providing,
Pour forth enraptured song."

The lily flowers receive their due meed of praise, for bees crowd round the fair blooms, "The lily's honey'd lip to seek." "The lily of the wild-bee fondly loved."

Nor does the illicit sweet of honey dew miss the keen notice of Eastern bards:—

"The bees flock to drink the honey'd dew;
So mischiefs crowd on man's ill fortune!"

A fair woman is well hit off in the following—"She was honey in converse, ambrosia to those who sought delight." Their poets say much of love and the flowers, and the bee is frequently brought in to point the moral or adorn the tale.

"The lover sips the nectar from his loved one's lips
As the bee fresh honey from the opening bud."

The bee is a familiar object in the hieroglyphics or picture writing of Egypt. It, and the lotus flower, appear as twin figures on many a tomb, monument, temple, and sacred edifice in this land of mystic symbolism; and the one was the emblem of Upper and the other of Lower Egypt. The bee stood for dignity and kingly power on these inscriptions. It stood, too, for beneficent influences such as the sun and moon. The bodies of the great and powerful were preserved by being placed in honey. In the records of Rameses II. we learn that he paid about two million jars of honey, oil, etc.; and in the temple or Osiris—one of their gods—a sum was granted wherewith to pay the daily demand for honey for sacrificial purposes. It was in great demand for domestic uses; thus we are told a man guaranteed his future wife that he would furnish her with "twelve pots of honey annually." It was also largely used in many medici-

nal compounds. Bee-keeping was, indeed, an important industry in the land of the Pharaohs, and was carried on systematically, as bee-keepers, we are told, with barges laden with hives sailed up and down the Nile to catch the successive honey flows. As many as four thousand hives are reported to have been seen at one time being thus transported from one harvest of flowers to another. Egyptian literature was also the cradle of many a bee-myth, Virgil and other classic writers having gleaned several of their stories about bees from this source.

A few general quotations, and then we are done:—

"He falls more easily than flies fall into honey." "The lazy are not fed with honey." "I had a neighbour whose speech was an honey-comb; his hidden thought a concentrated venom." "Without the thorn no rose; without the sting no honey." A Bedouin "sleeps with his lips at a honey bottle." "A learned man without practice is a bee without honey." "Butter and honey shall he eat, that he may know to refuse the evil and choose the good." "Pleasant words are as an honey-comb."

There is a great fascination about these pithy sayings, which might be quoted *ad infinitum*, but the foregoing must suffice.

(*Concluded.*) M.

CORRESPONDENCE.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

CURES FOR "ISLE OF WIGHT" DISEASE.

[9382] This week there are again two letters from Mr. Heap and Mr. Hollis on the vexed question of a cure for "Isle of Wight" disease.

Now, sir, you have as wide an experience as anyone in England; can you not shed a little ink on the subject?

Personally, I think all these letters miss the main point, i.e., that what we want to do is not to cure each individual infected bee, but to prevent the disease spreading to the young bees. I should advise all bee-keepers to *perpetually* keep strong germicides in every hive. Apicure and naphthaline are the cleanest and most easily managed. I am inclined to think that if everyone did this there would be less disease. I am hoping my bees will keep going, as I have no faith in these cures, Dioxogen or any of them. I should try it, of course, and I hope that no one will take Mr. Heap's advice not to try these things. Mr. Hollis deserves our gratitude for placing Dioxogen before bee-keepers, but he must not be too sure yet. His cure is not yet proven, and cannot be yet. I am sure many of us are looking forward to hear from Mr. Hollis next May how his bees are doing. If they are then healthy it will look as if he has found a cure indeed.

I should like to point out to Mr. Heap that his argument at the end of his letter, that a remedy or deterrent will be no use because it cannot entirely wipe out the disease, is not sound. If this was so no cure for any disease would be of any use. Truly "drugs have never banished infection," but they have done a lot towards reducing disease and infection.

It is certainly difficult to see how such a dilute solution of Dioxogen can do any good, but I hope it is so, and remain myself one of those who "keep an open mind."—R. B. MANLEY.

MORE OF MR. HEAP'S RANDOM STATEMENTS.

[9383] I have followed with great interest the controversy on the efficacy of hydrogen peroxide in the treatment of "Isle of Wight" disease (so-called), but, not having had occasion to test it, have hitherto refrained from partaking in the discussion.

On pages 366-368 of the B.B.J., however, Mr. Heap makes such random statements about hydrogen peroxide that I feel compelled to clear them up for the sake of the people who may have been misled by what he has written.

Hydrogen peroxide, H_2O_2, as generally seen in trade, contains 3 per cent. of pure substance, corresponding to ten volumes of available oxygen. This means that when decomposed in presence of organic matter or other suitable substance, *ten times its own volume* of oxygen is given off. To this property it owes its efficacy as an antiseptic and disinfectant. It is non-poisonous and non-irritating, and so is applied locally to wounds, and used to cleanse discharging ulcers. It will cure obstinate cases of middle ear trouble, loosening the toughened masses of discharge. For external use, in skin diseases, a cream may be prepared with lanoline and 2 per cent. of the solution, and 1 in 8 solution may be used to spray the throat in diphtheria and scarlet fever, and as a disinfectant gargle or mouth-

wash. It has been recommended for internal use in diabetes, enteric fever, infantile diarrhœa, and bronchitis.

The dose for an adult is from half to two teaspoonfuls (approximately 30 to 120 drops).

The above description will serve to show that hydrogen peroxide is a drug capable of very wide application.

The fact that two teaspoonfuls of a ten volume or 3% (3 per cent.) solution is the maximum adult dose shows how powerful it is considered to be from a medicinal point of view.

To take Mr. Heap's figures. If a bee gets a dose of one-sixth of a drop. it can be considered to have had the maximum dose.

In view of these facts the paragraph dealing with rain water, hoar frost, etc., can be dismissed without comment.

To speak of flowers of sulphur, Epsom salts, etc., as being "more potent," is, of course, quite a random statement.

All the drugs mentioned by him have different therapeutic effects, and so cannot be compared. It would be well if Mr. Heap would confine his remarks to bees, of which, possibly, he has a certain knowledge, but in future to leave chemistry and therapeutics alone.—GEORGE H. BARNES.

[We have several other letters on this subject, but we think both Mr. Heap and his critics have had a "fair field and no favour," and no useful purpose will be served by continuing the discussion. We trust there will be some good practical results from the experiences and hints that have been given; for the rest, we leave our readers to form their own conclusions.—EDS.]

"ISLE OF WIGHT" DISEASE, DRUGS AND LEGISLATION.

[9384] I have been much interested in the discussion that has been carried on in the columns of B.B.J. as to whether "Isle of Wight" disease is curable by means of drugs, or not. But there is one point which seems to have been overlooked, and that is the absolute necessity for legislation in *any* case. If the disease is incurable then all diseased bees and infected material that cannot be disinfected must of necessity be burnt in order to stamp out the plague. If it is curable, in the interests of those who take up the bee-keeping industry seriously, we still require the strong arm of the law to make it compulsory that all apiaries shall be kept in a state of health and cleanliness. Does anyone imagine that the haphazard, careless bee-keepers, with whom the countryside is dotted, are going to be influenced by the fact that "Isle of Wight" disease is curable, supposing that it *is* curable by drug treatment? They will let the bees take their luck, as before, and let their hives stand open—a source of infection to all the neighbourhood—until the rats and mice and the disintegrating influence of the elements in time destroy them! And do not let us forget that "Isle of Wight" disease is not the only infectious disease to which bees are liable. There is a large mass of infected material lying about the countryside, and, unless and until this is destroyed, it is absolutely impossible even for the experienced and competent bee-keeper to carry on his business, for supposing an absolute, sure, and certain cure has been discovered, and that he avails himself of its use, his stocks will be continually re-infected by his negligent neighbours, and he will be put to the trouble and expense of continually curing them. I do not wish to obtrude my own private woes and grievances upon the bee-keeping fraternity, but if I were so disposed, I could unfold an almost incredible tale of the state of affairs, apicultural, in my own immediate neighbourhood. Let it suffice to say that, although a keen enthusiast in the craft, I have no intention whatever of attempting to re-stock my own apiary until some adequate means of protecting the careful and competent bee-keeper from the careless and incompetent is adopted, and I am sure that any re-stocking scheme, however laudable in itself, and however carefully carried out, is doomed to failure until legislative control is exercised over all owners of bees.

A few months ago I read an article in one of the daily papers advocating "Bee-keeping for Disabled Soldiers": it was just one of those misguided communications which, as our Editor says, under the heading of "Exaggeration" in this JOURNAL, do so much mischief by inducing the wrong type of person to rush into the business recklessly. The writer of the article in question, on the strength of the attendance at one lecture and one visit to an apiary, calmly and cheerily tells the public that all they have to do is to keep Dutch bees—apparently in skeps—and "Isle of Wight" disease will disappear of itself, and they will make their fortune with little or no labour!

Perhaps it is because I have been so hard hit myself by their ways, both in the keeping of bees and in the marketing of honey, that I have little love for the "muddling amateur," and none whatever for the indifferent and sloven.

Make people realise that bee-keeping is a real business, and an important industry, which must be learnt and carried on and controlled like any other business. Bring bees within the scope of the Con-

tagious Diseases (Animals) Act; let us have a Bee Disease Act, upon the lines of the New Zealand Apiaries Act, energetically administered throughout the United Kingdom, and in a very few years "Isle of Wight" disease would be stamped out of these islands as completely as rabies has been. The Board of Agriculture tells us that "as the Government have given an undertaking that no contentious legislation shall be introduced during the war, it is impossible to introduce legislation dealing with "Isle of Wight" disease at the present time." It is most unfortunate, for we are wasting valuable time and allowing other countries to capture our home honey market. When the value of imported honey for this year is published by the Board of Trade, the figure will be an eye-opener—but cannot we lay our plans and mobilise our forces *now*, for a vigorous after-the-war campaign against bee disease? I, for one, will render every assistance in my power, and I can vouch for the support of the largest bee-keepers in the county; nor should I be surprised if a good many of the erstwhile opponents of legislation, having been scourged, and I hope chastened, by a visitation of disease in their apiaries, have already modified their opinions, and will before long divert their energies from singing the praises of so-called "immune" varieties of bees, and of various "drug cures," and concentrate them in an earnest endeavour to introduce legislative measures to "cure" infectious diseases of bees in the same common-sense manner that anthrax and other like diseases of animals are "cured," viz., by stamping out and destroying every possible source of infection.—G. E. H. PRATT, Sheinton, Salop.

WEATHER REPORT.

WESTBOURNE, SUSSEX.

November, 1916.

Rainfall, 4.28 in.	Minimum on grass, 17, on 28th.
Above average, 1.00 in.	Frosty nights, 8.
Heaviest fall, .89 on 7th.	Mean maximum, 49.4.
Rain fell on 19 days.	Mean minimum, 37.9.
Sunshine, 38.0 hrs.	Mean temperature, 43.6.
Below average, 31.2 hours.	Above average, .5.
Brightest day, 22nd, 4.5 hours.	Maximum barometer 30.451 on 28th.
Sunless days, 13.	Minimum barometer, 28.512, on 18th.
Maximum temperature, 55, on 1st, 2nd, 3rd, & 24th.	L. B. BIRKETT.
Minimum temperature, 24, on 28th.	

Notices to Correspondents

Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. All questions must be accompanied by the sender's name and address, not necessarily for publication, but as a guarantee of good faith. There is no fee for answering questions.

G. SMITH (Burton).—*Making Foundation.*—Unless you use a large quantity of foundation it will not pay to make your own. You would find it a "messy" job; it would also take up a lot of time, and the foundation would not be nearly so good as that made by a manufacturer, who has special machinery and other facilities for the purpose. You are quite wrong in thinking that substitutes for pure beeswax are used for making foundation—in other words that it is adulterated. It would not pay to do so, as either the bees would be unwilling or unable to work it, or it would become so soft in the heat of the hive that it would stretch, and buckle, or break down. We do not know what the wax you refer to would be, certainly not beeswax at that price.

"WORRIED" (Tendring).—We are afraid we cannot carry out your suggestion, but will consider what can be done in our next volume

Rake out any dead bees from the entrances, and on a mild day you may turn back the quilts quietly, and if the bees are all right replace the sticks. Bees are always quiet during cold weather, but will fly when it is mild.

Honey Sample.

E. N. PATERSON (Didsbury).—The honey is quite fit for use. It will be improved if you reliquefy it. It is mainly from fruit and sycamore, with a little lime.

Suspected Disease.

F. C. (Cambs.).—The bees are slightly affected with "Isle of Wight" disease.

G. JONES (Wales).—The bees have died from "Isle of Wight" disease.

Special Prepaid Advertisements

Two Words One Penny, minimum Sixpence.

Will advertisers please read these Rules carefully in order to save trouble, as they will in future be strictly adhered to.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not permissible at above rate, but will be inserted at* 1d *per word as* **"Business"** *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of* 3*s. per* ½*in., or* 5*s. per inch.*

PRIVATE ADVERTISEMENTS are only intended for readers having **Surplus Stock** *to dispose of.* **Driven bees, Nuclei,** *and* **Queens that are reared or imported for sale,** *are Trade Advertisements, and can only be accepted under trade terms.*

Advertisements must reach us NOT LATER than FIRST POST on TUESDAY MORNING for insertion in the "Journal" the same week.

Orders for three or more consecutive insertions in "The Bee Journal" entitle advertisers to one insertion in "The Bee-Keepers' Record" free of charge.

PRIVATE ADVERTISEMENTS.

EXTRACTOR, GUINEA, geared; exchange for 60lbs. honey.—MILNER, Hook, Goole, Yorkshire. v 93

BY APPOINTMENT.

IZAL

The Modern High-Power Germicide is a reliable remedy against Foul Brood and Isle of Wight disease.

From the B.B.J., July 22, 1915.

IZAL AND "ISLE OF WIGHT" DISEASE.

"I had lost twenty stocks when I tried Izal with my remaining three stocks which were very badly affected . . . The bees are now in very good condition, due solely to the use of this disinfectant."

Sold Everywhere in Bottles, 6d. and 1/- each.

Ask for full details of IZAL Treatment, sent post free by—

NEWTON, CHAMBERS & Co., Ltd., THORNCLIFFE, Nr. Sheffield.

WANTED, empty W.B.C. hives, in good condition; no objection to bees having died of "Isle of Wight."—Write, SHACKELL, Lilworth, Pershore, Worcestershire. v 99

INCANTO Acetylene Generator for lantern; in good order; partly made of copper, 20s.—"DYNAMO," "BRITISH BEE JOURNAL" Office, 23, Bedford-street, Strand, W.C.

FOR SALE, by W. HERROD-HEMPSALL, Old Bedford-road, Luton, Ariel 3½ h.p. Motor Cycle and Side Car, in perfect condition; any trial or expert examination allowed; spares, belt, in leather case, two tubes, one cover, valve spring, back axle; all wheels fitted with Peter Union bands, back to saddle, horn, speedometer, three acetylene lamps, special luggage carrier on side car to carry two gallon can of petrol and one quart oil can, in addition to luggage, kick start, three speeds. Ridden by above, to be sold on account of medical advice; offers.

FOR SALE ¼ plate Koilos camera, with Goerz Dopp anastigmat f/6.5 lens, can be used either for hand or stand work, twelve single dark slides and film pack carrier. The whole packs in stout block leather sling case, 9in. long, 6in. deep, and 2½in. wide; also light brass telescopic tripod, in leather sling case, all in excellent condition, and used by me to take the illustrations in "Helpful Hints" and "Continental Wanderings." The outfit for sale in one lot for £6; reason for selling have bought a Reflex. A splendid opportunity for anyone wanting a good reliable camera. Will send on approval; Deposit.—HERROD, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED, at once, a small cottage, at about 9s. a week, with some ground (¼ acre), suitable for bee-keeping. It must have gas and water laid on, and be within 20 miles of N.W. London.—BOX 1, "BEE JOURNAL" Office, 23, Bedford-street, W.C. v 98

WANTED, suitable house and premises for a bee farm on considerable scale; necessities: quick access to London and good honey district; Bucks, Berks, Hants, or Oxford preferred. —Full particulars to "BEE FARM," "BEE JOURNAL" Office, 23, Bedford-street, W.C.

BUSINESS ADVERTISEMENTS.

COMFORTABLE APARTMENTS for Brother Bee-keepers visiting Douglas. Terms: Tea, bed, and breakfast, 3s 6d.; or full board, 5s. per day.—HORSLEY'S, Merridale House, top of Castle Drive, Douglas, Isle of Man.

COLONIAL HONEY.—LEONARD HALL & CO., 6, Rood-lane, London, E.C., Honey Importers and Packers for H.M. War Dept., the leading Stores, &c.

ROWE,

28a, Moy Road, CARDIFF,

SELLS Pure Honeys, Colonial and Californian, &c., carriage paid, tins free; cash. Samples 3d. BUYS Home-produced **Run Honey, Sections, and Beeswax.**

SAVE MONEY this winter by making up your own hives. Particulars of wood cut ready to make up into hives will be sent free on receipt of a post card.

E. J. BURTT, Manufacturer, GLOUCESTER.

A ROLL OF HONOUR.

Although bee-keeping is considered a minor pursuit, we venture to say that it has provided more fighting men than the usual average of any industry. To place on record the part the members of our craft have played in the present war we propose to make a "Roll of Honour," and shall be pleased if our readers will forward us the NAMES and ADDRESSES, together with the REGIMENT and RANK, of any bee-keeper serving his King and Country at home or abroad; also if killed or wounded.

We print a further list of names to those sent in, and shall be pleased to have other names as soon as possible.

Driver B. J. Williamson, Tower Road, Skirbeck, Lincs.—R.F.A.

Pte. A. Evans, Benington, Boston.—R.A.M.C.

Posted as missing since July 19, and now reported to have died as a prisoner of war in Germany, Lce.-Cpl. A. J. Macdonald, Royal Warwickshire Regt., youngest son of Mr. D. M. Macdonald, Schoolhouse, Morinsh, aged 20 years.

BRITISH BEE-KEEPERS' ASSOCIATION.

HONEY FOR THE LONDON HOSPITAL.

The Council of the British Bee-Keepers' Association are anxious to obtain gifts of honey for the wounded soldiers in the London Hospital, where it is urgently needed both for food and medicinal purposes. They will, therefore, be grateful for gifts of same, no matter how small, from bee-keepers throughout the British Islands. It is unnecessary to explain our obligations to these brave fellows, who have sacrificed health and limbs for the sake of our country. Gifts should be sent addressed to the Secretary, B.B.K.A., 23, Bedford Street, Strand. The donors' names will be published in the "B.B.J." and RECORD.

W. HERROD-HEMPSALL,
Secretary.

Amount already received	...	...	288½ lbs.
F. S. Shenton ...	...	...	7 lbs.
Total ...	...	...	295½ lbs.

THE ROYAL SHOW.

Our readers will not be surprised to hear that the Royal Show, which was to have been held at Cardiff next year, has been vetoed by the Ministry of Munitions. We understand it is proposed to hold the show at Cardiff in 1918, should the war be over.

EXPERIMENTS WITH "ISLE OF WIGHT" DISEASE.

By J. Price.

(Continued from page 311.)

The question is often asked, Does a stock of bees ever recover from an attack of "Isle of Wight" disease? At one time I should have replied without hesitation, and said "No," but recent events have compelled me to alter my mind somewhat, and although the cases now are very few, still I must bow to the inevitable and say "Yes, they may recover." I have some in mind that have recovered when assisted with drugs, and others that have lived without any medical aid whatever.

I know of several instances of apiaries in which the disease was once rampant that are now healthy, although the bees are still on the same combs, and in the same hives, and this after a period of two-and-a-half years having elapsed since the disease attacked them.

One case I will deal with. In June, 1914, an apiary containing six stocks of bees developed crawlers by the thousands; so much so, that the owner swept and shovelled them up every day to burn them.

In reciting this, the owner told me that as a last and bold resort he decided to re-queen each stock with a fresh, young queen, to see if he could save them. The young queens were introduced, after taking away the old ones, sometime in July.

The report next spring was as follows:—Three lots defunct, one very weak, scarcely a hundred bees and the queen, which were destroyed, and two other lots in a very weak condition.

During the season 1915 no crawlers were seen, and at the end of June brood and bees in these two stocks only covered six combs each, but being near to the heather they picked up so nicely that one of them swarmed in August, making three stocks to go into winter.

All three lots survived the winter in good condition, and in June this year were in splendid form, the swarm having recently superseded its queen.

Now, however, they have increased to seven lots, and all through the summer not a crawler has been seen. Since September Bacterol has been used as a preventive.

Now who would say that these bees did not throw off "Isle of Wight" disease in 1914 when the young queens were introduced? Be it noted that the two original

stocks are still on the same combs, in the same hives, and have the same excreta-stained brood boxes to reside in.

A case of this description is somewhat puzzling, and takes a lot of explaining; but what I think really happened is that all the individual bees that were diseased died off or were destroyed, and then with the timely addition of a young, vigorous queen that could produce a lot of brood quickly, it helped them to rally and get in condition ready for the winter. In the meantime all the older bees, still containing the spores, died off from old age, being worn out by exertion, leaving only the young uncontaminated bees to replenish the stock.

I think a great many make a mistake in assuming that because some of the bees in a stock have the disease all must have it and perish. No doubt this is what usually happened, but I think there are times and cases where the older bees may drop off and leave no infection behind them in the younger brood of the hive.

This is what evidently happens when a colony apparently recovers for a time, of which we have numerous examples, and happened to the stocks under discussion. We have also to remember that if a colony as cited should, for the time being, throw off the disease there are now so many opportunities of reinfection that it is next to impossible for them to remain free from disease for very long. Hence the necessity of using some drug to prevent the development of the spores at all times.

If we could rid a hive of all those bees which contain the parasite before the bees become sick, such as might occur if one changed the position of the hive as soon as the first crawlers were seen, and then destroyed all those bees that returned to the old place, and at the same time gave a young, vigorous queen to the old stock so that the loss could be made up quickly, we should be on a fair road to success.

This is what probably happens to a stock which swarms naturally just before the disease is timed to develop. The swarm containing all the older bees that are the most likely to be infected, leaves the hive, while the old stock thus being enabled to resist the disease for a longer period, the swarm soon develops disease and goes under.

It is well known that natural swarms, as a rule, develop and die of the disease long before the old stocks, from which they swarmed, show the least sign.

Therefore, I am inclined to think that with the passing away of the older infected bees, it is possible for a stock to recover from an attack and show no symptoms again for a very long time, probably not until it is reinfected from sources outside the hive.

(To be continued.)

A DORSET YARN.

"Increase and multiply," this was the command given in Holy Writ; if that same order were given to the bees that lived from 1915 in Dorset, they obeyed it with alacrity; only two stocks lived through at the Violet Farm; one in a butter box (a July swarm) was a wonder; two queens came out with the first swarm in late May, each threw a swarm in July, making four; the stocks gave three other swarms in June and July, making eight with the parent stock.

The other stock that lived was a hybrid Italian, that threw a large swarm in June which, after it was in the skep, came out and went off to some other village in a very great hurry, about 4 in the afternoon. It gave me two others which filled two racks of sections; one stray swarm came and settled in one hive where the bees had died the previous autumn, and the combs were full of honey. I put on them two racks of sections; each one had a whole piece of foundation; they uncapped the honey in the brood chamber at once, and started drawing out the sections, and had them filled in eight days; one other rack I gave them; this they filled, and, besides that, they lined the space between the racks and the outer case with honey (a large meat-dish full); this was a late swarm; they are still alive, and look like working the ivy every day there is sunshine.

In September I bought five other swarms, two in skeps and three in small tea boxes, which are still flying each warm day. On Wednesday, this week, I went to a farm sale to buy a van; it was frosty in the morning; at 2 o'clock the sun came out, and also the bees from four bar-frame hives; each of the stocks were in home-made hives, on legs, well up out of the grass, covered down with seed catalogues and newspaper; the four stocks were knocked down to me; they are now at the Violet Farm. These are blacks, and in great force; when the opening was free and all of them flew round and round their new home, it was like swarming time.

I have another wild stock brought me by the wood-cutters. They tied a bag over the opening before throwing the tree, and then sawed out the part and brought it to me in a wagon, so I hope to have a good number in 1917.

It might interest you to know that I sold 335 filled sections, and had a good number of "seconds" for our own use.—J. J. KETTLE.

A WONDERFUL CITY.

THE LIFE STORY OF THE HONEY BEE.

By Oliver G. Pike, F.Z.S., F.R.P.S.

(Continued from page 376.)

CHAPTER II.

HOW I LEARNED TO LOVE THE HONEY-BEE.

It was in a charming old Dorsetshire village that I first made the acquaintance of the honey-bee.

The little white cottage, covered with trailing creepers and lattice work, stood close to the dusty roadside. On a small strip of land between the house and the garden rails, many beautiful, but badly-cared-for flowers were growing. Outside the fence was a patch of greensward, which gave the small house a wider berth from the dusty road than otherwise would have been the case. Opposite were one or two smaller straw-thatched cottages, and farther along, the hedge in front of these gave way to a high green bank, covered with dense vegetation. It was just one of those old-world cottages with a lost history that looked exactly as if it was part of Nature, and had been standing there as long as there had been flowers to grow and birds to sing; it all blended in so beautifully with the tall trees, the blue sky far above, the green and gold fields around, and the silent grey hills beyond. Many fowls of mixed breed wandered aimlessly about the road, while farther down, near the small roadside pond, a proud and noisy gander declared to all who passed that the world belonged to him—that is, until you raised your stick at him, then trying hard not to show wounded pride, he would lower his long neck, and with many minor grunts waddle slowly back to the water.

Around the cottage, and just underneath the old red tiles, eave-swallows had their homes, and one day I saw several little black and white heads peeping out of the entrances, and the parents as they brought insects to the young martins seemed to be entreating them to come out to the sunshine and revel in the joys of the bright days. A talkative starling often sat on one of the chimneys, and between his chatterings which no one ever listened to, he tried to imitate the birds around him, of which more notice seemed to be taken. At the back of the cottage was a fruitful sloping garden, with an orchard beyond. Although not a large garden, it was, nevertheless, a very charming one. Though not well kept, mixtures of weeds and wild growths seemed to make it the kind of rural paradise a naturalist revels in. A brick wall on which peach trees were trained divided the garden, and on the other side of this, which had not been cultivated for many weeks, numerous gay butterflies flitted, dancing, as it were, over the tall sweet-scented flowers. There were many species there, painted ladies with torn wings—showing that their little lives were almost over; red admirals which sunned their wings on the garden path, and darted off over the garden wall, and returned again and again to the same spot; two species of blues, and these always seem to me to be next to the blue of an April sky, the most beautiful blue in Nature; and then on the lower weeds we saw that little jewel of the summer sunshine—the copper butterfly. Down below the garden hedge was an orchard, and under the trees ducks and fowls found their food; several pigs also wandered about, often finding their way through the badly trimmed hedge into the grassy lane or wagon track beyond. Away in the west were the Dorset hills, rising gradually towards the blue, covered with the fading green of a dry summer. This favoured cottage stood in a charming spot; the fortnight I spent there will ever be remembered, not only for the kind hospitality I received, but because it was there I first learned to love the honey-bee.

Some six or eight old-fashioned straw hives stood close to the house, and many an hour I spent in watching the bright-winged busy little people darting to and from the hive entrances, seeming as though they were gems of the air, as the hot summer sun made their glassy wings glisten in the light of those glorious days.

What a merry hum there was in that old garden as the heavily-laden bees, bringing in their store of honey, flew from the flower-scented air to their homes. The music of their wings, as the thousands of insects passed over my head, sounded as though they gloried in the sun: it seemed almost as though they knew it was the sun that helped to make the nectar in the flowers. To the very heart of the blossoms they went and took from them the sweetest that they can give, unconsciously giving back to the flowers that which they most needed — fertilisation. No wonder, then, that with this vast area of "liquid sunshine" awaiting them in the meadows and moors around, they gave a merry and deep-sounding hum, a sound which all bee-keepers love. And sometimes I sat there watching them, fascinated with an indescribable fascination as they entered or left their straw homes, until the last Worker had returned from the fields, or until the deeper music of the bees' wings had given place to the shrill continued strain of the large armies of gnats which hovered, like little travelling clouds of smoke, around the eave-swallows' nest, or floated from tip to tip of the tallest branches of the trees. When the many silent bats fluttered around my head, like

small fleeting ghosts, I left the garden filled with wonder, and with a great longing to penetrate into the secrets of those unpretentious straw hives, which I felt sure contained something far more marvellous than the average village bee-keeper is aware of.

For some time before this I had thought of keeping bees, but had never really decided to do so, but I received my first hive in a strange manner. I was at the same Dorset homestead, and the summer harvest of honey was almost over, and the moors were purple with heather bloom. When the latter had yielded its full supply of honey the question was asked me: "Will you help to burn the bees?" "Yes," I replied, not having the faintest idea of what my task was to be. However, when the twilight of evening gave place to darkness I soon discovered what I was to do. A small pit had been dug in front of each hive, and in this a villainous sulphur match was placed: this was lit, and when well burning I was told to lift each hive from its stand and place it over the burning sulphur! Of course, in a few minutes every bee in those populous hives was dead. This was the way that my friends took their honey, and to me, who had watched those wonderful little people gather in their harvest, it seemed like murder. I was successful in having one hive saved, and this was sent to my home, and it is to this first straw skep of bees, sent from this remote Dorset village, that I owe my knowledge of bee-life.

I found the study of bees so extremely fascinating that from time to time I increased my stock, until at one time I had as many as thirty-three hives under my care. *(To be continued.)*

HOMES OF THE HONEY BEE.

THE APIARIES OF OUR READERS:

MR. T. TAYLER.

Mr. Tayler is a bee-keeper of the right stamp, and of ripe experience. Although

MR. T. TAYLER'S HOME-MADE HIVE.

the photograph is not of his whole apiary it is a good illustration of what may be done by an energetic bee-keeper. Mr. Tayler has sent the following account of how his apiary was established, and his bee-keeping experiences:—

I think this is the first time I have reported any information respecting my bee work since you became Junior Editor of the B.B.J. and the RECORD. I have taken the RECORD for a good many years—please don't ask how many, or I am afraid you will think I am getting an old man. I am always anxious to get the RECORD, as I always enjoy reading it, and often get useful information from it. I think it is approaching thirty years since I first made a start in bee-keeping. It was an awfully cold day in March when I went to fetch the bees—driving about eight miles.

They were in a skep, and I paid ten shillings for them. I forget whether I paid in gold. That was supposed to be the proper thing to do in those days—for luck.

It was dark when I got home so I did not put them in position that night, but I did so next morning. Please bear in mind this was the first time I ever handled bees.

I was quite taken up with them. I suppose I was like other beginners—got the fever.

Well, when the weather got warmer, and they began to get busy, I used to take a chair and sit in the garden for hours watching them.

I don't do that now, the fever has gone: not that I have lost any interest in them, I am as fond of them as ever.

During the summer a swarm came from that stock. It was the first I had ever seen. Now, what was I to do? Fortunately for me I had a friend who had kept bees for years, whom I used to visit frequently, and I used to ask questions, and he was always ready and willing to give me any information—as I find the majority of bee-keepers are—and so I was instructed how to secure the swarm and hive it, which I did successfully.

I then began to make my own hives. They were made from bacon boxes. My supers I made from Tate's sugar boxes, as you will see from the photo, taken for me by a local schoolmaster.

You will see I am there, and my two daughters—who are not afraid of bees, and occasionally help, when needed. The other figure is a bee friend, who often renders first aid, but was too shy to remove his veil.

My total take this year I estimate at about 234 lbs. That amount has been "jarred off," and sold, so I take it the estimate is a fairly good one. Some few pounds I have given away, which I don't include.

I have lost one stock from "Isle of Wight" disease. This stock gave me a swarm on August 5, and was hived on August 7. There have been indications of "Isle of Wight" disease from this swarm, but after spraying with Dioxogen and Bacterol several times, and feeding with syrup medicated, I find there is a great improvement.

From the stock that died out I had 140 lbs. of honey and the swarm.

In 1913 I had to "put down" four stocks from "Isle of Wight" disease. I did not have any more until 1915.

So you see I have kept bees almost continuously since I began. Of course I belong to a Bee-keepers' Association. For some years I was a member of the Staffordshire B.K. Association, most of the time when Mr. R. Cock was the expert.

Now, I am happy to say, I am a member of the South Staffordshire and District B.K.A.

Since the formation of the latter Association, under the secretaryship of my old friend, Mr. Jos. Price, Haden Hill, Old Hill, bee-keeping has been greatly stimulated.

I always enjoy the meetings, whether Committee or General Meetings. I very seldom miss going, and am pleased to know that good progress is being made in our Association.

I consider the honey harvest this year has been grand, especially for the "Black Country." The clover has been *simply amazing*. I am quite satisfied.—T. TAYLER.

KENT BEE-KEEPERS' ASSOCIATION.

WESTERN DIVISION.

A lecture and demonstration on hive construction will be given by Mr. C. F. Gee, of Dover, on Saturday next, the 16th instant, at the Public Library, Dartford, commencing 6.15 p.m. The demonstration promises to be of great interest, especially to amateur carpenters. A cordial invitation is extended to all interested.—G. W. JUDGE, Hon. Secretary.

THE BRITISH BAR FRAME HIVE.

[9385] I am a little surprised that no one has taken up the challenge of Mr. Kidd in October 26th B.B.J., page 334, against the modern British hive.

Perhaps it has been overlooked in the stress of present business, or it may be that some who would like to answer him are afraid of being suspected of "old fashionedness" and lack of modern enterprise.

Although I do not profess to be able to argue the "pros and cons" of the scientific or commercial aspect of bee-keeping, I do think both Mr. Kidd and Mr. Simons (whose comment No. 9366 of November 2, page 345, seems to consist mainly of a diatribe against porches) have overlooked all the chief factors which preclude the possibility of England ever successfully entering into competition with America as a honey-producing country. By this, I do not mean we could not produce all we use, *at present*, in this country but we

could never produce at the price America does.

For these reasons:—America grows honey bearing crops by the thousand acres, besides having huge areas (as have many of our Colonies also) of natural forests producing immense honey crops.

Also, our climate absolutely prohibits a flimsy hive coming into general use—the past season's exceptional rainfall and the great gale of November 12 and following days amply prove this—besides often cutting off our main honey flow with unsettled weather.

But the chief point, to my mind, our critics have overlooked, is that we have to import, and from the very countries they advise entering into competition with, all the timber we need for manufacturing the hives with which they propose to cut out the makers of cheap hives.

I would remind Mr. Kidd that the majority of American bee-keepers take their hives indoors, preferably underground, during the winter, so that they do not have to stand six or seven months rainy weather. I wonder if the expense and labour of doing that would be saved by having cheaper hives?

If Mr. Kidd wants cheap and simple hives, why not use the interior fittings of the W.B.C. pattern, with no outside casing at all? Or has he a cheaper idea still? If so, we shall all be pleased to hear about it. Whether it would be adopted or not we should have to "wait and see."
—F. M. Claridge.

LEGISLATION FOR BEEKEEPERS.

[9386] Now that the Government are taking over the control of the food supply of the country, and as there is such a shortage of sugar, would it not be a good opportunity to get together the different resolutions passed by the various associations all over the country, and get them sent to the proper authorities, showing the feeling of the bee-keeping fraternity as to the necessity of legislation, so as to endeavour to check the appalling loss of bees through disease, still going on all over the country?

I am quite aware of the fact that the matter has cropped up before, and that the second reading of a Bill was passed, but it was then dropped, not only on account of the war, but also on account of the opposition of a small section of bee-keepers.

Surely the various resolutions passed by the different associations should have more weight than a small section of bee-keepers.

There need not necessarily be any unpleasant opposition.

What we want to do is, if possible, to get control over the people who, through carelessness, spread the disease.

Considering the importance of the industry, one would think it would be possible to get something done.

If the disease was notifiable, it would be better than nothing.—F. W. Moore.

"ISLE OF WIGHT" DISEASE: ITS CAUSE AND CURE.

[9387] For some weeks your columns have been rendered extremely interesting by the contributions relating to the all-important subject of the "Isle of Wight" disease; my object in trespassing on your space is to direct the attention of fellow apiarists to certain aspects of the subject which are apt to be overlooked in the search for a permanent cure for this plague, which has been allowed to run its disastrous course too long.

A careful analysis of the correspondence leads one to the conclusion that we bee-keepers cannot expect to achieve substantial progress towards the complete eradication of the disease unless, having now at our disposal certain well-tried cures, we also endeavour to ascertain the *cause* and *prevention* of the disease and to take steps accordingly.

After several years' experience of the unsuccessful treatment of the disease, resulting finally in the joyful discovery that Bacterol proved the means of quickly arresting the progress of, and ultimately cured, the plague in a badly-affected stock, a few outstanding facts have impressed themselves upon me, viz.:—

(1). Complete immunity, partial immunity, and impotence of certain stocks.

(2). Italian, Dutch, Carniolan, etc., are all equally liable to attack.

(3). Appearance of the disease in late autumn and early spring.

(4). A diseased stock, or stocks, of a neglectful apiarist invariably infect those in a neighbouring apiary, the partially immune stocks in which afterwards recover when the aforesaid stocks are destroyed or cured.

(5). Nucleus colonies, "mothered" by daughters of a queen, differ in their powers of resistance to *Nosema apis*.

(6). Nucleus colonies, "mothered" by a queen, mated in a district far from the parent hive, appear to possess special powers of resistance.

In placing before your readers the following arguments and theories, I do so

with the express purpose of eliciting their opinions and initiating a discussion which may be helpful in our having a fuller understanding of the cause of the plague and ultimately of attaining the object we all have in view.

There is never a plague without a cause or causes. I venture to assert that the predisposing causes of the "Isle of Wight" disease *may* be:—

A.—That artificial queen-rearing has a detrimental effect in lowering the vitality of our queens purchased from professional queen rearers. In-breeding in such cases cannot be avoided without a deal of care and trouble. The same remark applies to nuclei made with queens hatched during the natural impulse of swarming, but mated probably by drones from the parent hive.

B.—That in preventing casts we seriously interfere with the course of nature. Maiden queens heading or leading casts very often fly far from the parent hive, and have, therefore, a better chance of mating with alien drones—thus preventing in-breeding.

C.—That by the modern system of box hives we are over-straining the constitutions of our queens. We discourage her swarming by giving her still more room to lay—far beyond the numbers she would otherwise do in a wild state; then, in autumn, we further add to her burden by feeding with unnatural food to "stimulate" further egg-laying. Need we wonder that the progeny suffer?

D.—That in placing our hives less than a foot above the damp ground we are offending against the natural instinct of *Apis mellifica* which in their wild or uncontrolled state invariably select a position in a tree or roof. To avoid the excessive humidity arising from heavy, clay soil, I think our hives should be placed on stands not less than 3 ft. above the ground.

E.—Our feeding with sugar, syrup or candy, which should be regarded as an unsatisfactory substitute for pure honey. Bees wintered on sugar syrup must be detrimentally affected, particularly when the spores of *Nosema apis* have been ingested.

Reverting to facts 1 and 4. I have a strong suspicion that what I call partially immune stocks which have been known to recover of themselves have been influenced by the destruction of badly-diseased stocks in the neighbourhood. Cessation of the infection of water supply may be the cause of recovery.

As to fact 3, the sudden appearance of the disease in autumn may be due to the robbing of a neighbouring depopulated diseased stock. In the spring, the bees feeding upon end frames of comb containing mouldy or fermented honey, or syrup, for any length of time, may develop the disease following upon lowered vitality. With regard to items 5 and 6, it seems that in order to breed vigorous stocks from nuclei these should be removed, prior to hatching out of the queens, to a district not less than three miles from the parent hive, in order to eliminate the possibility of in-breeding, and brought back after fertilisation.

Finally, a strong recommendation ought to be made to the Board of Agriculture to enforce the notification of the disease subject to penalty for non-compliance by the owner of diseased stocks, then steps could be taken to cure, or destroy the stock or stocks beyond rescue.

I am pleased to say that the five stocks I now possess (including the one first treated with Bacterol in April) are in first-class condition. A very recent examination showed the bees clustering on eight combs in every hive. All that was done in September was to spray with weak Bacterol solution the wet, shallow frame combs after extraction, and these were given the stocks to clean up.—E. A. GLEN.

Special Prepaid Advertisements

Two Words One Penny, minimum Sixpence.

Will advertisers please read these Rules carefully in order to save trouble, as they will in future be strictly adhered to.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not permissible at above rate, but will be inserted at* 1d. *per word as* "**Business**" *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of* 3s. *per* ¼*in., or* 5s. *per inch.*

PRIVATE ADVERTISEMENTS are only intended for readers having **Surplus Stock** *to dispose of.* **Driven bees, Nuclei,** *and* **Queens that are reared or imported for sale,** *are Trade Advertisements, and can only be accepted under trade terms.*

Advertisements must reach us NOT LATER than FIRST POST on TUESDAY MORNING for insertion in the "Journal" the same week.

Orders for three or more consecutive insertions in "The Bee Journal" entitle advertisers to one insertion in "The Bee-Keepers' Record" free of charge.

PRIVATE ADVERTISEMENTS.

STRONG stock bees, in frame hive, W.B.C. pattern, £1; another, in box hive, 12s., abundant stores; three spare hives, with standard frames, 5s. each; or £2 the lot; no disease; free on rail.—BUCK, Llanfarian, Aberystwyth. v 3

SIX W.B.C. hanging frame section boxes, with dividers, 4s. each; unused, soiled, 4s. each; 100 ordinary pattern section racks, 1s. 3d. each; twenty shallow frame boxes, 1s. 6d. each.—"X. Y. Z.," "BEE JOURNAL" Office, 23, Bedford-street, W.C.

WANTED, suitable house and premises for a bee farm on considerable scale; necessities: quick access to London and good honey district; Bucks, Berks, Hants, or Oxford preferred. —Full particulars to "BEE FARM," "BEE JOURNAL" Office, 23, Bedford-street, W.C.

BY APPOINTMENT.

IZAL

The Modern High-Power Germicide is a reliable remedy against Foul Brood and Isle of Wight disease.

From the B.B.J., July 22, 1915.

IZAL AND "ISLE OF WIGHT" DISEASE.

"I had lost twenty stocks when I tried Izal with my remaining three stocks which were very badly affected . . . The bees are now in very good condition, due solely to the use of this disinfectant."

Sold Everywhere in Bottles, 6d. and 1/- each.

Ask for full details of IZAL Treatment, sent post free by—

NEWTON, CHAMBERS & Co., Ltd., THORNCLIFFE, Nr. Sheffield.

WANTED, cheap, for cash, secondhand copies of "Scientific Queen Rearing," by Doolittle, and "Queen Rearing in England," by Sladen.—M. DONEGAN, 4, Nicholas-street, Cork.

½ CWT. of fine light honey, candied, 50s., tin included.—W. GREEN, Builder, Laindon, Essex. v 1

EXTRACTOR (The Guinea); exchange for wax or honey; Single and Double Comb Rhode Island Red Cockerels, March hatched, ready for breeding, 12s. 6d. each.—ARNFIELD, Birchwood Drive, Leigh-on-Sea. v 2

BEES.—Wanted to purchase, stocks, on standard frames.—Send full particulars to W. H. SIMS, 9, Cole Bank-road, Hall Green, Birmingham.

INCANTO Acetylene Generator for lantern; in good order; partly made of copper, 20s.—"DYNAMO," "BRITISH BEE JOURNAL" Office, 23, Bedford-street, Strand, W.C.

FOR SALE, by W. HERROD-HEMPSALL, Old Bedford-road, Luton, Ariel 3½ h.p. Motor Cycle and Side Car, in perfect condition; any trial or expert examination allowed; spares, belt, in leather case, two tubes, one cover, valve spring, back axle; all wheels fitted with Peter Union bands, back to saddle, horn, speedometer, three acetylene lamps, special luggage carrier on side car to carry two gallon can of petrol and one quart oil can, in addition to luggage, kick start, three speeds. Ridden by above, to be sold on account of medical advice; offers.

FOR SALE ¼ plate Koilos camera, with Goerz Dopp anastigmat f/6.5 lens, can be used either for hand or stand work, twelve single dark slides and film pack carrier. The whole packs in stout block leather sling case, 9in. long, 6in. deep, and 2½in. wide; also light brass telescopic tripod, in leather sling case, all in excellent condition, and used by me to take the illustrations in "Helpful Hints" and "Continental Wanderings." The outfit for sale in one lot for £6; reason for selling have bought a Reflex. A splendid opportunity for anyone wanting a good reliable camera. Will send on approval; Deposit.—HERROD, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

BUSINESS ADVERTISEMENTS.

COMFORTABLE APARTMENTS for Brother Bee-keepers visiting Douglas. Terms: Tea, bed, and breakfast, 3s. 6d.; or full board, 6s. per day.—HORSLEY'S, Merridale House, top of Castle Drive, Douglas, Isle of Man.

COLONIAL HONEY.—LEONARD HALL & CO., 6, Rood-lane, London, E.C., Honey Importers and Packers for H.M. War Dept., the leading Stores, &c.

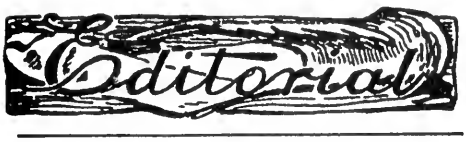
ROWE,

28a, Moy Road, CARDIFF,

SELLS Pure Honeys, Colonial and Californian, &c., carriage paid, tins free; cash. Samples 3d. BUYS Home-produced **Run Honey, Sections, and Beeswax.**

SAVE MONEY this winter by making up your own hives. Particulars of wood cut ready to make up into hives will be sent free on receipt of a post card.

E. J. BURTT, Manufacturer, GLOUCESTER.



TO OUR READERS.

We shall be greatly obliged if our readers, when their subscriptions expire, will let us know as soon as possible if they wish to continue to take in the paper. We hope they will all do so, and, if possible, recommend the JOURNAL to other bee-keepers, and thus help to secure new subscribers. Subscriptions should be sent in advance, and to members of the British and Affiliated Associations it is 5s. 6d. per annum, post free. Any member desiring to take advantage of this concession must send order and cash through their Association secretary. Failing any order of renewal the paper will be discontinued. To prevent disappointment orders should be sent at once, as in the present state of the paper market we cannot afford to print papers to sell as waste, and, in addition to that, we feel that any waste, however small and in whatever direction is at this time unpatriotic. We are, therefore, only printing a very small margin over actual orders, and back numbers will soon be out of print.

Will all those, also, who are in arrears with their subscriptions kindly send the cash along as soon as possible, and thus save us the time and expense of continually sending out small accounts.

We take this opportunity of again thanking our numerous readers for their continued support and many letters of appreciation and encouragement during these very trying times, and look forward with confidence to a continuation of their support during the coming year.

To all we would convey our heartiest good wishes for the season, and trust that next Christmas may of a truth be a season of peace.

BRITISH BEE-KEEPERS' ASSOCIATION.

HONEY FOR THE LONDON HOSPITAL.

The Council of the British Bee-Keepers' Association are anxious to obtain gifts of honey for the wounded soldiers in the London Hospital, where it is urgently needed both for food and medicinal purposes. They will, therefore, be grateful for gifts of same, no matter how small, from bee-keepers throughout the British Islands. It is unnecessary to explain our obligations to these brave fellows, who have sacrificed health and limbs for the sake of our country. Gifts should be sent addressed to the Secretary, B.B.K.A., 23, Bedford Street, Strand. The donors' names will be published in the "B.B.J." and RECORD.

W. HERROD-HEMPSALL,
Secretary.

Amount already received ... 295½ lbs.

OBITUARY NOTICE.

MRS. G. W. AVERY.

We are sorry to report the death of Mrs. Avery, wife of Mr. G. W. Avery, late secretary of the Cumberland and Westmorland B.K.A. She passed peacefully away on the 14th inst. after a long illness borne with cheerful resignation.

Mrs. Avery had many friends in the Border Counties and among our readers, and did a great amount of work for the Cumberland and Westmorland Association during the whole time Mr. Avery was secretary, work that was done quietly and without ostentation, and few except her husband know the many sacrifices of time and labour which she made on behalf of bee-keepers. Mr. Avery desires the news of her death to be conveyed to her numerous friends who, in many instances, can now only be reached through the agency of the BRITISH BEE JOURNAL.

We can assure Mr. Avery and his family that the sympathy of our readers, along with our own, is extended to them in their irreparable loss of a loving and devoted wife and mother.

REVIEWS.

Bird Biographies. (By Oliver G. Pike, F.Z.S. London: Jarrold & Sons, Warwick Lane, E.C. 6s. net.)

Through Birdland Byways. (By the same Author and Publishers. 6s. net.)

Farther Afield in Birdland. (By the same Author and Publishers. 6s. net.)

These three volumes should be on the bookshelves of all true lovers of Nature. They are written in the fascinating style of the author, who is one of the foremost authorities on ornithology. Our first acquaintance with him was made many years ago, for, like all lovers of Nature, the bee attracted him. The books are enhanced by the splendid photographs taken by the author from life, with a camera of his own invention.

What patience, what dogged determination, and what discomforts have been endured by the author to give his readers as much first hand knowledge of bird life as possible!

What an interesting story is that of the kingfisher, obtained only by spending days hidden from view in close proximity to their nest. Again, what daring climbs have been made. In speaking of the buz-

zard the author naively tells us of the beautiful scenery viewed from the nest on a cragg 1,000 feet high.

Then the risk of taking a companion or two to the "hide" erected to take photographs of the common thrush, so that all but one could walk away when the bird came to its nest, which it would not do when the author went to the "hide" himself and remained there.

In the three volumes there are 146 illustrations, each one a perfect study in itself. We heartily commend these books, either singly or as a set, for gifts at the present season, especially to boys.

BLURTS FROM A SCRATCHY PEN.

CHRISTMAS, 1916.

Christmas! Ere yet another issue of our JOURNAL appears, ere yet this ink is scarcely dry, Christmas will have come and gone, gliding past us into history. The third Christmas of the great war! It makes one serious, and sad, when thought of in that light. Some are missing who were with us last year at this season. We think of them, we remember them, silently. No, we cannot talk about them. That lump in the throat prevents us, but the glistening eye, which one is half ashamed of, and which we turn our heads to conceal, tells a tale.

Christmas! How happily it comes just in the very middle of the darkest, and coldest, time of the year, to cheer us up. Just think what a terrible season it would be from November to March, if there was nothing to break it up. But there, Christmas comes when it is most wanted, drives the "blues" away for a few days, and gives us heart to go through the second half of the winter. And really few people think of the awful plight, if we had no Christmas for which to fix our preparations, and lay our plans, as we do, for months beforehand. Wonderful things we are going to do at or "after Xmas"! But perhaps it would be discreet not to insist too much on these. Like many other good resolutions, not confined to this time of the year only, they have a habit of vanishing, absolutely and completely, or else they are conveniently folded up and put away to appear again next year. Whatever *would* happen if there were no Christmas cheer to provide for, no Christmas boxes, no Christmas cards, no holly, no mistletoe, "no nothing." It is really too horrible to contemplate. So I say our ancestors were very wise when they fixed for this season this festival as a time for jollification. And they knew how to be jolly, although, perhaps, it was in rather a rough way. Jousts and tournaments for the knights, and singlesticks and wrestling for the common herd. Then, also, they had their "mystery" plays, of which possibly our pantomimes are a sequence.

There are always two sides to a question. I have considered Christmas from the view of those who eat, but what do they think who are doomed to be eaten? I am often told by the owners of those little dogs which a needy Chancellor of the Exchequer proposes to tax out of existence, that they are quite sure their pets can understand them. Let us suppose that other animals have some share of this intelligence. What do they think of Christmas preparations? Are they proud to be killed and eaten? Has it the ring of the gladiator's salutation, "Morituri vos salutant"? ("They who are about to die salute you.") That turkey cock strutting about the poultry yards, gobbling until he is crimson in his wattles, and spreading his tail in the vain attempt to outvie his neighbour the peacock, and those silly old geese, hissing with open beaks and stretching their necks as if they *could* possibly frighten anyone—do they know of what Christmas will bring to them? That fat pig snoring on the straw in the sty, occasionally opening his blue eyes to wink at you, or, better still, those lumps of porcine fat one sees at the Agricultural Hall each December—do they know they are

"Born to be brawned and baconised"

at Christmas? This is truly a very interesting question, but I am afraid we shall have no solution of it until we find some means of exchanging ideas with animals, some code of grunts, squeals, barks, and mewings. But we should need to bellow to talk with the oxen. And could we hum like our bees? There is a link missing somewhere. It is all very well for Darwin to say we are descended from monkeys, and that as the necessity for climbing trees decreased, so did our tails, until we had none left. How useful they would be at swarming time when one has to climb a tree after an errant swarm. If we had descended from animals we should, I am sure, have retained some recollection of their speech. When we find the connection, which he maintained is lost, perhaps then we shall also find a conversational affinity.

Hallo! I am almost at the end of my space, and I have not yet wished my readers the usual Christmas greetings. Why should I repeat the well-known formula "A Happy Christmas"? That goes without saying. But what shall I wish my fellow bee-keepers this year of war? To those at home, I would that the coming year should be one of plenty, overflowing, that disease be far from their apiaries, and that they may have all health to enjoy their labours. To our

brothers in the fighting lines. Heaven grant that ere Christmas 1917 they may have returned, having done their "little bit" and secured such a lasting peace that the world may forget war's wild alarms. How gladly shall we welcome them, how willingly help them to start afresh.—Jno. Smallwood.

A DORSET YARN.

The old saying, "Stolen kisses are the sweetest," may be true, or seem so in the time of youth, but as events prove this year stolen bees give the most honey. This was brought under my notice this season. A farmer in Lower Lychett had a large June swarm in the park of South Lychett Manor. While he went to borrow an empty skep from a neighbour the bees were seen by another estate man, who took the only box he had (a Tate sugar box), cut a small hole for the entrance, shook the bees in, covered them with a bag, and carried the lot to his garden near by. The farmer (through not having a surplus of skeps) lost his bees, and never knew where they went.

On the first Monday in August someone called to see me about some bees. I was away, but he came again in the evening. Would I come and see his bees? The honey was running out beneath the large hive, and the bees were drowning themselves in the large dish he had placed under to catch the running honey.

Taking a skep and smoker, I mounted the cycle and went with him. What had happened was soon seen. The sugar box had not any stays across the length and breadth to help carry the great weight of honey, and the combs had dropped from their fastenings, blocking the entrance. How to save the bees was the trouble, being a celt, the first thought of how to act in this difficulty was acted on at once. A piece of board at each end of the roof was broken off, the skep placed over the one opening and a few puffs of smoke sent in the other, and I then started tapping. In half an hour the skep was nearly full of bees. These were placed by the side of the sugar box. After sliding the box and its contents on to three boards with two strips nailed underneath, the lot was carried by myself on to a large stool and the box laid on its side. Never in all my life have I seen anything like it. The bees had started in one corner, but the greater part of the combs were built the lengthway of the box. These large slabs of honey were lifted out by sliding one's hands and arms beneath each one. Some large trays and dishes had all the best pieces, the glazed bread pan and ware washing utensils holding the parts that had contained brood, but which were filled with honey. I estimated there were about 160lbs. of honey in the box. I hope I have made out a case that "stolen bees give the most honey."—J. J. Kettle.

BACKWARD, OR ONWARD!

Another year has run its crooked course over our sorely tried and bewildered heads, friends, aspects, and circumstances are quickly changing, and gone; things that have no life are out of the struggle; nothing can stand still, all must live to grow and grow to live.

British bee-keepers, like the rest of the community, have their own special trials, aims and sphere of labour. We set our eyes on "State recognition" for the prevention of disease, etc. Until that is accomplished we may be said to be in a state of war with the Government. Of course, we wish to do nothing to delay or frustrate the big business they have in hand, even if we could, but if we organise our forces I think we may be able to give them substantial aid in some of their biggest problems, viz., the production of food and employment of disabled sufferers from the war, both inside and outside bee-keeping and agriculture, which are so nearly related, and yet which depend so much on the efficiency of the former. We entered the "lists" of "Production and Distribution." Is the tournament too big, or are our champions not ready? At any rate, we have not struck many blows. We read sometimes of the "British Association" being termed the parent society. We look to our parent for guidance. Does not some of the work overlap? Do not expenses occur which ought to be met in some way by the particular centre visited either by show or lecture? We have ample reason to be jealous of foreign competition, and to wonder very much why our younger brethren of the Colonies are so well organised and able to undercut us in our home market, to say nothing of means of attacking and dealing with disease by State aid.

We seem to have an opportunity of making good now, which, if not taken advantage of, may not occur again for a very long time. The Government are already buying and leasing estates for settlements. Are we coming forward with a policy of help? We have not even an apicultural corner in the Agricultural Office—in spite of all they are doing for us? So the move must come from our side. Can we not divide the work of the "old 'un" up a bit, so that we may be able to know what we can do and how to set about it? And the Journal! If half

of us were able to get a new reader what an enormous impetus that would mean, and I'm sure some of the "Hints" and "Enemies" lately are as fascinating as a serial story, and worth heaps more intellectually, if only as a nature study. And only by exercising our "voice" can we hope to make ourselves heard.

Some of us may take advantage of the tune, but there is plenty of room for competition, and we can safely rely on the courtesy and taste of the Editors to bring out what is useful and good; so may many more take a hand in a deserving cause.—A. H. HAMSHAR.

THE HONEY AND BEE APPLIANCE EXHIBITS AT THE NELSON, B.C., FAIR.

The honey exhibits at the Nelson, B.C., Fair, September 27 and 28, 1916, although not very numerous, were quite sufficient to demonstrate that a prosperous future is in store for the important industry of bee-keeping in the Kootenays. The honey shown was unsurpassed for flavour and quality, and would hold its own in the keenest competition anywhere. There is no reason why all the honey consumed in British Columbia should not be produced in the Province. It has been stated that the present annual importation is at least eighty tons, which at 20 cents per pound would amount to $32,000.00. This would not be all the benefit, however, as the services rendered to the community by the bees in pollenising the fruit blossoms and so increasing and improving the fruit crops are simply incalculable. For this purpose it has been estimated that at least one hive of bees is required for each acre of fruit trees, so that more and more bees should be kept if only for this purpose alone. There have been some remarkable yields of honey during the past season. At one apiary in Creston two tons of extracted honey and five hundred pounds of comb honey have been taken from forty-one hives, spring count. The value of this at 20 cents per pound is $900.00, making it quite an important side-line. Specimen jars of honey taken at various places in the Kootenays were interesting. There was a sample of water-white white clover honey of the usual exquisite and delicate flavour from Cranbrook, and Alfalfa honey of somewhat pronounced flavour from Invermere, which had already granulated, although only gathered recently. There was also another sample from the Dominion Experimental Farm at Invermere, taken from a hive on scales which produced a total of 260 lbs. of honey. On one day, July 16, the scales showed that the bees of this hive brought in 15 lbs. This colony did not swarm. Other good takes recorded are 180 lbs. from one hive at Nakusp, and 240 lbs. and two swarms from one hive at Erie.

Much interest was taken in Mr. Romain's exhibit of bee supplies. Every requisite for the equipment of a modern and up-to-date apiary can now be obtained in Nelson. All the appliances for which wood is used in their construction are now turned out here quite equal, if not superior, to those manufactured at the Coast and in Eastern Canada. Some of the metal goods, such as honey strainers, etc., are also being made in Nelson, and giving satisfaction. Among the numerous supplies exhibited by Mr. Romain were double and single-wall hives of the latest approved designs, both made up and knock down, Langstroth frames, sections and separators, feeders, queen cages of different kinds, wire and zinc queen excluders, reversible honey extractors, uncapping tray, solar wax extractor, etc. Mr. Sheppard's observatory hive, containing live Golden Italian bees, excited a good deal of interest.—*Communicated.*

DIFFERENT METHODS OF QUEEN INTRODUCTION.

By W. J. Sheppard, Nelson, B.C.

Numerous plans have been devised for introducing queens but there are very few that can be absolutely relied upon to give satisfactory results under all conditions and circumstances. At certain times of the year, for instance during a honey flow, the introduction of an alien queen presents very little risk, and almost any method employed would be successful then; but when there is no honey being brought in by the bees, queen introduction often presents many difficulties, especially to the amateur bee-keeper. The following are some of the methods that have been tried and recommended during the last few years:—

Water Method of Queen Introduction.—Kill the old queen; remove all combs from the hive and shake into the bottom, with a sharp jar, all the bees possible. Sprinkle the mass of bees on the hive floor until they are soaking wet. Use plenty of water; there is no danger of overdoing this part. Wet the new queen thoroughly and put her on the pile of bees. Put back combs, and the job is finished.

Introducing by Smearing Queen with Honey.—Put queen in half a cup of honey. Do not be afraid to put her away down into it with your fingers. Smear her all over, the bees will lick her clean. Get

her covered deep, and pour her and the honey into the top of the brood chamber.

Simmins' Direct Introduction.—1. Keep the queen *quite alone* for not less than thirty minutes, without food, but warm.

2. Insert after dark, under quilt, first driving the bees back with smoke.

3. No further examination is to be made until after forty-eight hours have expired.

4. Make no division of, or nucleus from, the hive within three days prior to insertion of queen.

A. C. Miller's Smoke Method.—Inject into hive a cloud of thick, white smoke, and use enough to get the bees into a heavy roar. Then run in the queen, and shut in the smoke and queen for about ten minutes.

Requeening without Dequeening: Doolittle Method.—If you wish to supersede any queen, on account of old age or any other reason, you have only to put on an upper storey with a queen excluder under it; place a comb of brood, with a queen cell upon it, in this upper storey. After the queen cell has hatched, withdraw the queen excluder, and your old queen is superseded without you ever having to find her.

The foregoing are methods of introducing queens without the use of a cage, but there is little doubt that there is less risk of failure, and without much disturbance to the bees, by using either of the following plans:—

Frame Cage Method.—A wire cloth cage is constructed large enough to take an entire Langstroth frame. Into this place a comb of hatching brood, after first shaking off all the old bees. Then insert queen and hang cage in the centre of brood nest for two or three days, when the comb can be removed from the cage and replaced in the hive. The young bees that have hatched out in the cage will not be antagonistic to the fresh queen. This is the only one they ever knew.

Pipe Cover Cage Method.—An ordinary wire cloth tea strainer, with the wire attachment for the tea-pot removed, makes a good introducing cage. It is pressed into the face of a brood comb, about half an inch deep, with the queen underneath. She is liberated after about forty-eight hours if the bees are then seen to be friendly disposed towards her. If not she can be caged again for a further period.

Two Other Cage Methods.—Catch the old queen and place her in the cage intended for the new queen. After a few hours remove her and put the new queen in cage. The bees then more readily accept the new queen, as the odour of the old queen remains behind. Or, put the queen to be introduced into a new cage with one or two newly-hatched bees from the hive to which you are going to give her.

Mailing Cage Method.—The ordinary mailing cage, inverted over feed-hole, is generally a safe and easy way of introducing a new queen. The bees of the hive liberate her in from twenty-four to forty-eight hours by eating away the candy. This plan can be made much more sure by adopting either one of the methods just described, in addition. If at the same time a slow feeder is placed on the hive, containing warm thin syrup, it also helps considerably by putting the bees in a favourable humour for accepting a new queen.

CORRESPONDENCE.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

MALICIOUS DAMAGE TO BEES.

[9388] I have sent a cutting from the *Hampshire Herald*. The Mr. Christmas referred to is a friend of mine, and a new beginner in bee-keeping. Last year he began with a swarm which he found and brought home. They wintered well, and this year commenced swarming. He gave me the first, but both parent stock and swarm threw off more swarms until we have between us had twenty-seven swarms, all having originated from the one old stock. Was anything like this ever known before? I never have, and I have been interested in bees all my life—84 years. I can trace that my ancestors have kept bees over two hundred years. My grandmother had bees stolen in the olden days when they used old leather shoes for a smoker.

I have had my apiary swept clean out of bees three times by "Isle of Wight" disease, but I have begun again with seven stocks.—JOHN WHITE.

Two youths, 17 and 18, named Jesse Andrews and Victor Watts, were summoned at the Alton Police Court by Frank Dady Hills for doing malicious damage to nine stocks of bees to the amount of 25s. —The prosecutor, sub-postmaster and overseer, stated that he kept the bees on

a piece of ground in Anstey Lane, near the railway bridge. On Friday evening, November 3, he found one hive had been disturbed, while the covering on the others had been removed. On the way home, in consequence of a communication made to him by Mr. Christmas, of Holybourne, he informed a police sergeant. Next day he found that the hives had again been disturbed, and subsequently, in company with P.C. Oliver, he made another examination and found that about nine hives had been disturbed, the covers of some removed and put back in a disorderly manner. One frame was missing. —Leonard Christmas, of Mill Lane, Holybourne, employed by the L. and S.W.R., said he was walking along the line at 4.55 p.m., when he saw the defendants searching the hives. Watts had the top of a hive in his hand, and the other was looking in. He asked what they were doing, and they both ran away and jumped a 4ft. 6in. fence. He picked up the bees on the frame, put them back in the hive, and informed Mr. Hills.—Supt. Reuben said the police had had a number of complaints about lads doing damage in the neighbourhood.—Defendants, who had nothing to say, were fined 10s. each, and ordered to pay the damage and costs between them, 25s. each. Time allowed for payment.

BEE-KEEPING AS A SCHOOL SUBJECT.

[9389] Now that "learning by doing and by directed observation" is becoming the keynote of educational methods, a multitude of subjects, involving practical work, have been suggested as suitable media of education, and teachers have a wide choice from which to enrich the school curriculum. Bee-keeping has certain claims to consideration, especially as an adjunct to school gardening. It might be said to be as complementary to school gardening as a corollary is to a proposition of Euclid, for bees have an intimate relationship to the fruit crop, and no village garden seems complete without its hive of bees. In school garden work the teacher who is anxious to make the subject serve the highest educational aims, cannot fail to have been struck with the unfortunate fact that, in almost all cases, whenever an insect is encountered it is there as an enemy against which ruthless warfare must be waged. The boy uses his cap as a sort of anti-aircraft artillery against the "cabbage-white" on its egg-laying expeditions among the cabbages. The wire worm and leather-jacket are "gassed" with one or other of the soil fumigants, and the spade is used to eject others from their "dug-outs." All this tends to bias the scholar against insect life generally. Now bee-keeping serves as a useful corrective to this tendency, for the scholar soon finds what a useful friend the bee is, and he cannot fail to learn valuable lessons from its habits.

A teacher inexperienced in bee-keeping and who contemplates adding the subject to his curriculum, could not do better, in the first instance, than join one or other of the county bee-keepers' associations. He will be able to obtain the assistance of paid experts, who will advise him as to the best and cheapest method of making a commencement in his locality, and he will come in contact with enthusiasts—and most bee-keepers are enthusiasts—whom he will find most willing to share their knowledge with him and give him practical assistance in bee manipulation.

The small amount of capital necessary to start bee-keeping might be provided by the scholars themselves. A limited liability company might be formed, and in this the teacher will see considerable possibilities of correlating the school arithmetic with the subject, while increased interest will be aroused. The woodwork lessons might similarly be brought into close relationship with bee-keeping. The hive and some of the fittings might be made, the frames wired, and comb foundation fixed by the scholars. The hive is also an excellent object from which to take scale drawing exercises and problems in mensuration.

The nature study enthusiast, with the help of an observation hive which could be made by the scholars, will find plenty of scope for this subject, for bees rank with ants and wasps as the insects in which instincts and intelligence are most highly developed, and from them valuable lessons of industry, order, cleanliness and sacrifice for the common good may be learned. —T. W. K. Skelby, L.C.P., Expert, British Bee-keepers' Association.

PRESS CUTTING.

ADULTERATED HONEY FROM HUNTLY.

At Aberdeen on December 12—before Sheriff Laing—Robert Duncan, honey dealer and insurance agent, Ladysmith, parish of Huntly, was charged with having, on November 13, sold 1lb. 14ozs. of honey which was not genuine, as it contained 26 per cent. of sugar, contrary to the Food and Drugs Act.

Accused did not appear, and Mr. W. D. Esslemont, advocate, tendered a plea of guilty on his behalf.

Mr. Esslemont said that in order to save his hives accused had fed the bees on sugar. It was quite possible that some of the sugar which had not been eaten by the bees had got mixed with the honey.

The Fiscal (Mr. Thomas Maclennan) said there had been complaints against accused. The public analyst found in this particular sample 34.6 per cent. of sugar. He made the very liberal allowance of 8.6 per cent. as the maximum amount of cane sugar ever found in genuine honey from bees fed on sugar.

It was a common dodge to feed bees with sugar, but no respectable bee-keeper in Aberdeenshire would do that sort of thing. Sometimes bee-keepers required to feed their bees with sugar in the winter time if the stock of honey upon which the bees lived was likely to go down. Accused provided himself with a boiler for refining the sugar and mixing it with the honey. He was charging something like 2s. per lb. for sugar. There was a substantial profit at that rate. He was doing a roaring trade with people in the South —with people who did not know him. The sugar which was refined had the honey flavour.

The Sheriff: No blame is attached to the bees?

The Fiscal said no blame was attached to the bees. Money was to be made out of bees, and the genuine bee-keepers would look with scorn upon a man who would do that sort of thing. Accused had a factory for adultering the genuine honey.

The Sheriff said it was a serious case of adulteration. Accused would have to pay £5, with the option of thirty days' imprisonment.—From the *Aberdeen Daily Journal*.

HONEY IMPORTS.

The registered value of honey imported into the United Kingdom during the month of November, 1916, was £4,168, from a return furnished to the BRITISH BEE JOURNAL by the Statistical Office, H.M. Customs.

Notices to Correspondents

Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. All questions must be accompanied by the sender's name and address, not necessarily for publication, but as a guarantee of good faith. There is no fee for answering questions.

CAMRO O' LEAN (Carnarvon).—*Queen Rearing.*—This subject has been exhaustively dealt with in THE BRITISH BEE JOURNAL last year and this in our "Helpful Hints" articles. (2) They may kill some of them. The colony is either queenless or the queen has not mated. (3) Hang up in the trees, a little distance from the hives, a few coconut shells filled with hard fat; this will attract the tits away from the hives.

A. B. (Kent).—*Home-made Hives.*—We have a leaflet, "A Home-made Hive, Constructed from Used Boxes," which we will send post free for 1d.

J. WHITE (Kent).—(1) The W.B.C. is the best. (2) Yes, if attended to at the right time, but it is not much used now. (3) Let the bees stay as they are until the spring, when you may—if the combs are straight—drive the bees. Cut out the combs and tie those containing brood into frames, or place the box over a brood-box filled with frames fitted with foundation, and allow the bees to work down, afterwards removing the box, as described on page 149 of the "British Bee-keepers' Guide Book." (4) You can do nothing until spring, when if you turn the box up you may be able to part the combs and see if there is any sealed brood, or you can drive the bees until you find the queen, or satisfy yourself the bees are queenless.

Honey Samples.

E. BISSETT (Worthing).—Both samples are mainly from clover, and both are of good quality. We cannot say why one should granulate before the other; it is one of those things that cannot be explained.

Suspected Disease.

BADENOCH (Kingussie).—The bees are suffering from "Isle of Wight" disease.

Special Prepaid Advertisements

Two Words One Penny, minimum Sixpence.

Will advertisers please read these Rules carefully in order to save trouble, as they will in future be strictly adhered to.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not permissible at above rate, but will be inserted at 1d per word as* **"Business"** *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of 3s. per ¼in., or 5s per inch.*

PRIVATE ADVERTISEMENTS are only intended for readers having **Surplus Stock** *to dispose of.* **Driven bees, Nuclei,** *and* **Queens that are reared or imported for sale,** *are Trade Advertisements, and can only be accepted under trade terms.*

Advertisements must reach us NOT LATER than FIRST POST on TUESDAY MORNING for insertion in the "Journal" the same week.

Orders for three or more consecutive insertions in "The Bee Journal" entitle advertisers to one insertion in "The Bee-Keepers' Record" free of charge.

PRIVATE ADVERTISEMENTS.

FOR SALE, in London, S.W., owing to death of owner, four healthy stocks of bees, in telescopic hives; four section racks and dividers; twenty-one sections, in the flat; one bottle feeder; two rapid feeders; smoker; two veils; two queen excluders; about 3lb. foundation; brood and super; "Guide Book," Coronation edition; suit beginner; £7 10s. the lot; deposit; particulars.—Box B., "BRITISH BEE JOURNAL" Office, 23, Bedford-street, Strand, W.C.

FOR SALE, extractor, Lee's "Guinea," geared, 30s., or offer; another, Taylor's, nearly new, cost 35s., accept 25s.—CLARIDGE, Copford, Colchester.

SIX W.B.C. hanging frame section boxes, with dividers, 4s. each; unused, soiled, 4s. each; 100 ordinary pattern section racks, 1s. 3d. each; twenty shallow frame boxes, 1s. 6d. each.—"X. Y. Z.," "BEE JOURNAL" Office, 23, Bedford-street, W.C.

WANTED, suitable house and premises for a bee farm on considerable scale; necessities quick access to London and good honey district; Bucks, Berks, Hants, or Oxford preferred. —Full particulars to "BEE FARM," "BEE JOURNAL" Office, 23, Bedford-street, W.C.

BY APPOINTMENT.

IZAL

The Modern High-Power Germicide is a reliable remedy against Foul Brood and Isle of Wight disease.

From the B.B.J., July 22, 1915.

IZAL AND "ISLE OF WIGHT" DISEASE.

"I had lost twenty stocks when I tried Izal with my remaining three stocks which were very badly affected . . . The bees are now in very good condition, due solely to the use of this disinfectant."

Sold Everywhere in Bottles, 6d. and 1/- each.

Ask for full details of IZAL Treatment, sent post free by—

NEWTON, CHAMBERS & Co., Ltd., THORNCLIFFE, Nr. Sheffield.

FOR SALE, or exchange, young Liver and White Spaniel dog, well trained, and good worker, good to children; owner going to the Front, and obliged to part with dog.—Apply, MR. A. BEACHEN, 2, Bottle-lane, Mansfield, Notts. v 5

WANTED, TO HIRE, secondhand foundation mill, drone or worker base, for short period only.—CLARIDGE, Copford, Colchester.

WANTED, cheap, for cash, secondhand copies of "Scientific Queen Rearing," by Doolittle, and "Queen Rearing in England," by Sladen.—M. DONEGAN, 4, Nicholas-street, Cork.

BEES.—Wanted to purchase, stocks, on standard frames.—Send full particulars to W. H. SIMS, 9, Cole Bank-road, Hall Green, Birmingham.

INCANTO Acetylene Generator for lantern; in good order; partly made of copper, 20s.—"DYNAMO," "BRITISH BEE JOURNAL" Office, 23, Bedford-street, Strand, W.C.

FOR SALE, by W. HERROD-HEMPSALL, Old Bedford-road, Luton, Ariel 3½ h.p. Motor Cycle and Side Car, in perfect condition; any trial or expert examination allowed; spares, belt, in leather case, two tubes, one cover, valve spring, back axle; all wheels fitted with Peter Union bands, back to saddle, horn, speedometer, three acetylene lamps, special luggage carrier on side car to carry two gallon can of petrol and one quart oil can, in addition to luggage, kick start, three speeds. Ridden by above, to be sold on account of medical advice; offers.

FOR SALE ¼ plate Koilos camera, with Goerz Dopp anastigmat f/6.5 lens, can be used either for hand or stand work, twelve single dark slides and film pack carrier. The whole packs in stout block leather sling case, 9in. long, 6in. deep, and 2½in. wide; also light brass telescopic tripod, in leather sling case, all in excellent condition, and used by me to take the illustrations in "Helpful Hints" and "Continental Wanderings." The outfit for sale in one lot for £6; reason for selling have bought a Reflex. A splendid opportunity for anyone wanting a good reliable camera. Will send on approval; Deposit.—HERROD, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

BUSINESS ADVERTISEMENTS.

COMFORTABLE APARTMENTS for Brother Bee-keepers visiting Douglas. Terms: Tea, bed, and breakfast, 3s. 6d.; or full board, 6s. per day.—HORSLEY'S, Merridale House, top of Castle Drive, Douglas, Isle of Man.

COLONIAL HONEY.—LEONARD HALL & CO., 6, Rood-lane, London, E.C., Honey Importers and Packers for H.M. War Dept., the leading Stores, &c.

ROWE,

28a, Moy Road, CARDIFF,

SELLS Pure Honeys, Colonial and Californian, &c., carriage paid, tins free; cash. Samples 3d. BUYS Home-produced **Run Honey, Sections, and Beeswax.**

SAVE MONEY this winter by making up your own hives. Particulars of wood cut ready to make up into hives will be sent free on receipt of a post card.

E. J. BURTT, Manufacturer, GLOUCESTER.

TO OUR READERS.

We shall be greatly obliged if our readers, when their subscriptions expire, will let us know as soon as possible if they wish to continue to take in the paper. We hope they will all do so, and, if possible, recommend the JOURNAL to other bee-keepers, and thus help to secure new subscribers. Subscriptions should be sent in advance, To prevent disappointment orders should be sent at once, as in the present state of the paper market we cannot afford to print papers to sell as waste, and, in addition to that, we feel that any waste, however small and in whatever direction is at this time unpatriotic. We are, therefore, only printing a very small margin over actual orders, and back numbers will soon be out of print. Failing any order of renewal the paper will be discontinued.

A subscription form will be found on page 412.

Will all those, also, who are in arrears with their subscriptions kindly send the cash along as soon as possible, and thus save us the time and expense of continually sending out small accounts.

OBTAINING SOFT CANDY FOR BEE FOOD.

Bee-keepers will be pleased to know that it will now be possible to obtain supplies of soft candy for their bees. The quantity of sugar we were able to obtain for feeding purposes grew "gradually less and beautifully small" until we were unable to obtain any at all. Under these circumstances our manager, Mr. J. Herrod-Hempsall, obtained an interview with Sir Walter Essex, M.P., who, as a bee-keeper, could grasp the situation, and asked if it was possible for him to persuade the Royal Commission on the Sugar Supply to allow a supply of sugar for the purpose of feeding bees. He kindly undertook to do what he could, and promptly set to work. After working hard for over a month, and overcoming various obstacles, his efforts have been crowned with success, as the following question and answer in the House of Commons last week will show:—

Food Control Department, Sir Walter Essex: To ask the hon. member for Wilton, as representing the Food Controller, whether he has completed arrangements enabling bee-keepers to procure medicated sugar for the immediate winter feeding of bees, and will he say what steps he is taking to make public this provision.

Capt. Bathurst: The Royal Commission on the Sugar Supply have arranged to grant a quantity of sugar not to exceed 50 tons in all for the purpose of feeding bees in the United Kingdom. Such sugar will only be available in the form of bee candy. Its proper use will be safeguarded by medication under the advice of the bee experts of the Board of Agriculture, and its manufacture and sale have been undertaken by Messrs. Jas. Pascall, Ltd., Blackfriars, to whom all applications, whether from persons in the trade or private individuals, should be addressed.

Messrs. Pascall are the well-known wholesale confectioners, and it is quite possible they will not be able to supply odd pounds by post; but, under this arrangement, it will be possible for any dealer in appliances, or even any grocer or confectioner in the most remote country village, to order a supply from Messrs. Pascall or their wholesale dealer. Syrup or plain sugar will not be supplied, and if syrup is needed it must be made from the candy.

The thanks of all bee-keepers are due to Sir Walter Essex for the trouble he has taken in this matter. He has not only interviewed the various authorities concerned, but various laboratory experiments have had to be conducted to—as Capt. Bathurst puts it—safeguard its proper use, that is, as food for bees only, and not for domestic use.

We do not suppose the Government measures so indicated will be directed to more than this. The added chemical may or may not have curative effects upon bee disease, no proviso on that matter is given.

We advise our readers to at once place their orders for candy if it is required. We owe it to our country and ourselves to help to produce as much food as possible during the coming summer, and the value of honey as a food and sweetening agent cannot be over-estimated, but dead bees gather no nectar, nor do they carry out the pollination of fruit blooms. We hope no bee-keeper will grudge spending a few shillings in order to preserve the bees, and thus directly, and indirectly, give an increase in our food supply, which in value will be much beyond the outlay in candy.

OBITUARY NOTICE.

MR. G. ROBERTS.

Our dear old friend, Mr. Geo. Roberts, of Broad Green, has passed away, so I want to send you herewith a few particulars for the JOURNAL and RECORD.

He was in his 89th year, his 88th birthday being in August last.

He had been a bee-keeper for well over

half a century, and was a true representative of the craft, for he was always the ever-ready and willing helper and friend of the bee-keeper.

He was truly the "father" of our Association, having been one of the Committee when the old Lancashire and Cheshire Association was founded in 1882; and he had at all times been an enthusiastic and staunch supporter of the Association and its work. As a Vice-President and as a Member of the Executive Committee he had attended the meetings almost to the very last. He was a judge of honey of no mean order, and had acted as such for us on many occasions in the county.

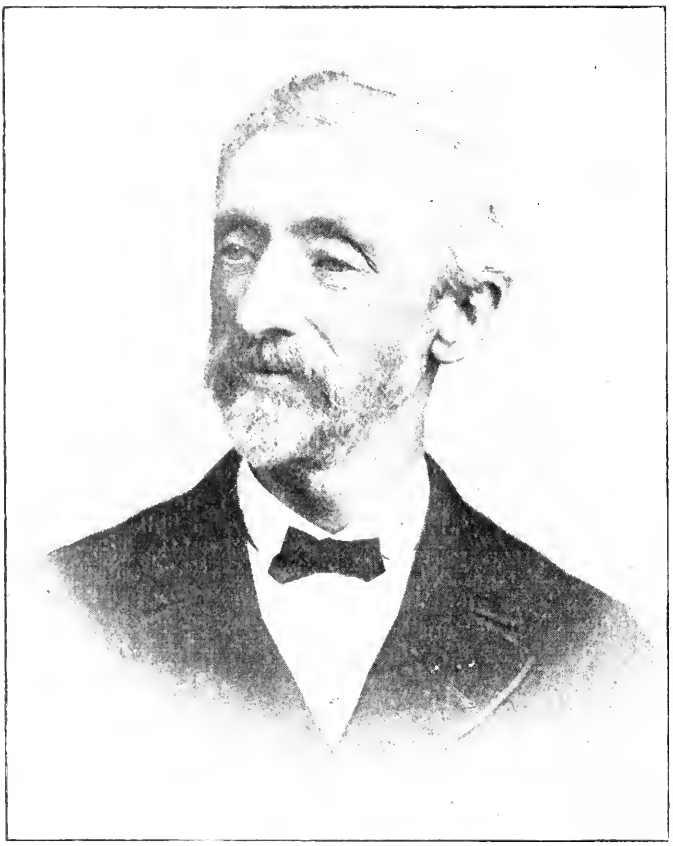
This is the second blow our Association has had this year—Dr. Anderton, our chairman, having passed away in June last. We can ill afford to lose these two supports, two of the strongest we had. Of each it may truthfully be said—"We shall never see his like again."

Mr. Roberts was a real Liverpudlian, and it was quite a treat to listen to his reminiscences of the Liverpool of 70 or 80 years ago and its people—and especially of bee-keepers and the craft of those days.

A few weeks ago he got a chill and took to his bed, where he lay without pain or complaint, except of a feeling of "tiredness," until he finally passed away painlessly and quietly on December 1, as though he had truly "fallen on sleep."—J. N. Bold.

Mr. Roberts was a master watch maker by profession and a close friend of the late W. Broughton Carr. When the latter resided near Liverpool his proud possession was a watch made specially for him by Mr. Roberts, and which he wore for the greater part of his life.

As a youngster, many years ago, just starting out on his career as an expert in Lancashire, the Junior Editor well remembers the kindly advice and friendship extended by Mr. Roberts, a friendship which we are pleased to say continued to the day of his death.—Eds.



THE LATE MR. G. ROBERTS.

BRITISH BEE-KEEPERS' ASSOCIATION.

HONEY FOR THE LONDON HOSPITAL.

The Council of the British Bee-Keepers' Association are anxious to obtain gifts of honey for the wounded soldiers in the London Hospital, where it is urgently needed both for food and medicinal purposes. They will, therefore, be grateful for gifts of same, no matter how small, from bee-keepers throughout the British Islands. It is unnecessary to explain our obligations to these brave fellows, who have sacrificed health and limbs for the sake of our country. Gifts should be sent addressed to the Secretary, B.B.K.A., 23, Bedford Street, Strand. The donors' names will be published in the "B.B.J." and RECORD.

W. HERROD-HEMPSALL,
Secretary.

Amount already received ... 295½ lbs.

A WONDERFUL CITY.

THE LIFE STORY OF THE HONEY BEE.

By Oliver G. Pike, F.Z.S., F.R.P.S.

(*Continued from page* 392.)

I never tire of being amongst the bees, either in the early spring when each colony seems to be acquiring new life and vigour, or in the summer when the joyful hum fills with music the morning air, and there is no music in Nature quite like that of the bees' wings, or in the days of autumn when the summer stores are sealed up, and the workers are preparing for a period of rest. I love my bees as I love the summer sun, with its following of many-coloured flowers, and the songs of countless birds. Bees are to me part of the summer, they belong to the sweetly-perfumed meadows, and the blossom-covered orchards of spring; without them the long days would want a chief attraction; a summer without its bees would be empty, like a woodland corner without the blackcap's song, or a brookside bank without its flowers.

As I look back upon those sunny days in that Dorsetshire garden, I feel glad that I had the opportunity of making a first acquaintance with this wonderful little people, and having found out what remarkable workers they are, and how their brief lives are invested with so much interest, it is no wonder that I, who have been a lover of birds and flowers all my life, should learn to love them too.

CHAPTER III.

A GLANCE AT THE CITY.

Before we enter into the details of this small but wonderful City, let us take a passing glance at the hive as it is.

At first sight the hive looks like a wooden box, with a few insects flying about at the entrance. There seems to be nothing very striking to look at, yet if we draw closer we notice that the bees, instead of flying about aimlessly before the hive, are in reality going in two opposite directions. Some are flying to the entrance and are taking in their stores, others are quite as busy darting out to gather more honey. Their actions are, however, so quick that it is difficult to follow them with our eyes as they take their rapid upward flight to disappear in space. Some of those which return have two large coloured lumps on their hing legs; these are the pollen bearers, or the Workers, which gather the "bee-bread" with which the young are fed. They gather from the flowers the fine powder or pollen, and this is stored away for future use in the waxen cells of the City. While others seem to be taking nothing in, their distended bodies, and sometimes heavier flight, tell the experienced bee-keeper that they are taking into the City large stores of honey. Then the water-carriers pass in, also those carrying propolis, a sticky substance that those special workers collect from the pine and other trees; this propolis is used for sealing up all loose parts of the City, for covering and sealing up any unpleasant thing, such as a snail, or any other creature that may enter the hive and die, and which is too large for the bees to remove. At the entrance we see many bees standing, rapidly fanning their wings; these are the Workers which ventilate the hive. They are standing outside the entrance, "fanning," drawing bad air out while others inside are drawing fresh air into the hive. We see, too, at the entrance there are other bees standing, which challenge all those which enter. As the Workers return they are examined by these door-keepers or sentries, for the inhabitants are guarded as carefully as a regiment of sleeping soldiers might be guarded by those placed in position to watch. No strange bee is allowed to enter; if one such should endeavour to do so, three or four of those on guard will at once pounce on the intruder, and eject it by force if necessary, and often the bee loses its life in the attempt.

Then as we watch this busy little nation hurrying to and from their home we become fascinated, for here before us is a small, compact, but very wonderful city, full of the greatest energy; and if so much animation is seen outside, what must be the scene within? Before we open the hive, let us watch the brown insects a little longer from the entrance of their wooden house. A small group of bees is seen struggling with something;

we look closer, and watch their labours with interest, for these are the scavengers of the City. They are taking out one of their dead comrades, for no pollution is allowed inside, and every scrap of dead matter that it is possible for the scavengers to move is turned out. As these near the edge of the alighting board, one of the scavengers picks up the dead comrade and flies away; over the hedge we can see him go, and when about ten or twenty yards away, the body is dropped, and the scavenger returns and goes on with his labours of cleaning the city. A small vessel near the hive contains water, on which several pieces of wood are floating; on the wood are many bees, taking in as much water as they can carry. These are the water-carriers already mentioned, for water is a necessity of the bees. Although the honey-bee is so cleanly in its habits, and seems to love purity in the hive, it is a strange fact that when there is plenty of fresh water placed close at hand for them, they will often fly further away and choose some of the most stagnant and evil-smelling fluid it is possible to find. But let no lover of honey imagine that this water pollutes the honey, for the latter is kept absolutely pure. Thus we see, as we watch the hive, honey-gatherers passing in, water-cariers, scavengers, masons with the propolis, sentries at the doors, and the housemaids, as we might term them, fanning air into their home. As we watch, we can only say that truly here is a wonderful little people.

Let us draw closer to the City, don our veils, and open to our view the interior. The roof of the hive is lifted, and a piece of calico which covers the bees is carefully turned up and peeled off, a few puffs of smoke meanwhile being blown over the mass of bees which rise from the walls. It is a sight that may, if it is the first time we have seen it, fill us with astonishment. Ten wooden bars are seen, and between these there is a moving mass of bees—a thousand little winged bodies, converted by the sunshine which now penetrates to the walls of their city into a thousand glistening bodies of golden brown. It makes the stranger shudder when he realises that each one of those many insects has a sting. But we need not fear, for if we go to work steadily, and do all our movements in a slow, determined manner, the bees submit, and are as harmless as flies. But let one who knows not how to handle them fling open a hive, and in an instant the great population will be on the defensive; instead of a peaceful air pervading the colony, it will become a death-trap. Hundreds of the thirty to sixty thousand inhabitants will dart forth with an angry buzz, and their sharp stings, each bristling with a tiny drop of poison, will be driven into the flesh of the too-venturesome offender. And these defenders of the city die soon after inflicting this wound, for they can, as a rule, only sting once, and thus hundreds perish in the act of protecting the stores in common.

(*To be continued.*)

THE SOLAR WAX EXTRACTOR IN THE APIARY.

By W. J. Sheppard, Nelson, B.C.

The solar wax extractor is a most useful appliance in the apiary, and no bee-keeper's equipment is complete without one. It very soon pays for itself, if only through the saving of the wax from little scraps of burr-comb that are often thrown away. Bits of new comb and cappings are quickly rendered into wax by this means, and much unnecessary mess and labour saved. The wax obtained is brighter and generally a better colour than when extracted by other methods. It is not advisable to use the solar extractor for rendering old combs, as these really require a wax press to get all the wax out of them. The wax from old combs is usually dark in colour, and for this reason they should always be kept separate from new combs, or cappings, from which the lightest and best wax is obtained. A very good solar extractor, large enough for a small apiary, can be purchased complete for about five dollars, but anyone at all handy with tools can easily make one that will do the work just as effectively. All that is necessary is to construct a box, two feet six inches long, sixteen inches wide, and eight inches deep (outside measure), with a double glass lid. A three-sided tray, five inches deep and eighteen inches long, is made of tin to fit inside, and rests on a platform so as to bring it up to a level with the top of the box. This is to receive the cappings. A loose piece of wire cloth, bound round with tin to make it more rigid, rests at the bottom end, to keep the cappings in place, and this also acts as a strainer through which the melted wax drips into a metal pan as soon as the temperature gets high enough. Two short legs at the top of the box give it the right slope to catch the sun's rays and cause the wax to flow freely. If a piece

of cheese cloth, or muslin, is laid inside the tray, before putting in the cappings, all the dirt and residue will be left behind on this, and can be taken away bodily after the wax has run out, thus leaving the extractor quite clean and in readiness for use again. Any honey that is left in the cappings will drip into the pan along with the wax, and as soon as the latter cools it remains as a cake on the top, free from all impurities. It can then be remelted and moulded by placing it in a jug or other vessel stood in water and heated over the stove until it is sufficiently liquefied to pour out. If put up in one-ounce cakes and placed in cartons it can generally be sold to the best advantage. Dentists are often glad to get pure light wax of this kind, for which they are usually willing to pay a good price.

Rendering wax by sun heat is not by any means a new idea, but the present extractors used for this purpose have been greatly improved, and are probably as near perfect as it is possible to make them. Honey should not be left in the solar extractor any longer than absolutely necessary, as the excessive heat therein soon causes it to lose its aroma and spoils its colour by darkening it.

GROW ALSIKE FOR THE BEES.

By W. J. Sheppard, Nelson, B.C.

If farmers and ranchers could be prevailed upon to grow Alsike instead of red clover it would be possible to produce much more honey in British Columbia than at present. This would encourage more people to keep bees, and the fruit growers would benefit by better fruit crops resulting from the greater certainty of pollination and cross-pollination of the fruit blossoms. Next to white, or Dutch, clover (*Trifolium repen*), Alsike (*Trifolium hybridum*) is the most important of our nectar-producing plants. The flowers yield quite as much honey as the Dutch, and of equally good quality. This clover was originally introduced from the village of Alsike, in Sweden, from which it obtains its name. It was at first thought to be a hybrid, between the white and the red, but it is now considered by botanists to be a distinct species. It is a true perennial, and therefore useful for permanent pastures. It is more suitable for moist soil and a damp climate, and for growing on irrigated land, than red clover, and it will succeed on acid soils where the latter fails. When made into hay it is not so coarse and woody as red clover, and is therefore of greater food value to stock, and they much prefer it. After being cut it flowers the second time, and the bees are able to gather honey from it after the Dutch clover has done blooming, thus continuing the honey flow for a prolonged period. It stands heat and cold better than red clover. It is usually sown in the spring, and if required for hay is frequently grown with timothy, which causes it to stand up better. The proportion of seed recommended per acre is 1 lbs. Alsike and 8 lbs. timothy. It can also be sown with red clover, and will remain when the latter has run out. It cannot be too widely known that hive bees are unable to gather honey from red clover, except very rarely when the second crop blossoms happen to be dwarfed, because the corolla tubes are too long for their tongues to reach the nectar.

SAINFOIN.

ANOTHER USEFUL FODDER PLANT THAT IS GOOD FOR BEES.

Sainfoin (*Onobrychis sativa*), another of the fodder plants that are good for bees, is very little grown in British Columbia, and should be encouraged where the conditions are favourable for its cultivation. It has a pretty pink flower, and yields a beautiful amber honey of good flavour. Bee-keepers can always tell when the bees are bringing in honey from sainfoin, because the combs built therefrom have a remarkably bright yellow tint. The plant is perennial, and belongs to the family of legumes, all of which are useful for storing up nitrogen in the soil, which benefits succeeding crops. When established it will last for six or seven years, when it usually gets crowded out by grass or weeds. It generally yields two crops of hay, after which it makes good pasturage, especially for sheep. The hay is somewhat woody, and is therefore more suitable for feeding horses than for stock. It is sown in the spring, frequently in conjunction with a grain crop. If sown alone it is better to drill it in than to sow it broadcast, as it can then be cultivated and kept free from weeds until it gets established. The quantity of seed required per acre is four bushels of rough seed (in pod), or 50 lbs. hulled. This would be a good crop to grow for the production of its seed, as it yields seed freely, which ripens well in this country. The bees would also then get the benefit, by being able to work on it longer, as it makes the best hay when cut at the commencement of flowering. Sainfoin has been tested side by side with alfalfa at the Dominion Experimental Farm, Invermere, where, I am informed, it has been found that it will stand drought better than alfalfa. Calcareous and clay soils are most suited to its growth and development.

INDEX.

Owing to the Christmas holiday, and shortage of labour, we are unable to print the title and index this week. They will be included in our next issue.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

WASPS *v.* BEES.

[9390] I find a simple but effective way of preventing robbing, or keeping wasps out of hives, is to close the doors to ½ in., and then place a piece of board, about 7 in. long and 3 in. wide and ¾ in. thick, flat on alighting board and against the door; for if it is a W. B. C. hive with closing doors this still leaves a narrow tunnel between board and doors which bees can use, but along which robbers will will not venture.—J. F. H.

THE BRITISH BAR FRAME HIVE AND BEE LEGISLATION.

[9391]—I am very pleased to see that someone has at last seen fit to challenge the statements of Mr. Kidd and myself in regard to the above hive. As my sole object in supporting Mr. Kidd's arguments against this hive as advanced by him on page 334 in BRITISH BEE JOURNAL of October 26 is to see the British bee-keeping industry advancing with that of other countries, I will reply to a few points raised by Mr. F. M. Claridge in his criticism (9385) on page 393 in BRITISH BEE JOURNAL of December 14. I feel all the more pleasure in doing this because I myself, like Mr. Claridge, "do not profess to be able to argue the 'pros and cons' of the scientific or commercial aspect of bee-keeping." (1) With regard to porches (which is only one of the many superfluities) my contention is that they cause unnecessary labour and expense. Where a man keeps a few hives of bees for pleasure the question of porches does not figure, but when it comes to a large apiary, kept for business purposes, the matter is different. I say, Mr. C. (without any offence to Mr. Taylor), which looks the most like business, as distinct from a hobby—the photographs on pages 350 and 351 B.B.J., November 9, or the one on page 392 B.B.J., December 14? (2) I do not think Mr. Kidd suggests for one moment that England should compete with America as a honey-producing country, but I would remind Mr. Claridge that the "honey-bearing crops by the thousand acres" which are grown in America can just as easily be grown in this country, as they are largely composed of alsike and other clovers. Our own British expert, Mr. Samuel Simmins, in "A Modern Bee Farm," advocates the growing by farmers of more honey-producing plants, and he even recommends the professional bee-keeper to farm one hundred acres, if possible, solely for the production of a succession of clovers. It certainly would be better if the farmers would grow more of these valuable clovers, and it would be to their own advantage as well as that of the bee-keepers. (3) Mr. Claridge has made a very big mistake in assuming that Mr. Kidd and myself are advocates of "a flimsy hive." Neither in Mr. Kidd's article nor in my own "diatribe," as Mr. Claridge puts it, is there any reference to flimsiness in the construction of hives. Does Mr. Claridge consider a hive with sides an inch thick flimsy? Simplicity in construction is the point. (4) Again, Mr. Claridge talks about great gales and exceptional rainfall in England, but I would remind him that the North American Continent, including Canada, is a pretty big place with a greater diversity of climates than we have here. One would think from what Mr. Claridge says they don't get any gales on the North American Continent or any rain, but I would remind him that his remark "besides often cutting off our main honey flow with unsettled weather" applies to the United States and Canada as well as to this country. The chief point to my mind, but which Mr. Claridge overlooks, is that the hives and methods advocated by Mr. Kidd and myself are the standard for the vast North American Continent, besides our enterprising Colonies in other parts of the world. Mr. Claridge seeks to remind us that a good many American bee-keepers take their hives indoors for the winter. Yes, and they would still have to take them indoors if the bees were hived in our English pattern hives. Very many Canadian bee-keepers do not take their hives indoors for the winter. Mr. Holtermann, one of the best-known bee-keepers in Canada, winters his bees out of doors successfully, and Ontario is none too warm in the winter. The hive suggested by Mr. Claridge, viz., "the interior fit-

tings of the W.B.C. pattern hive, without the outside case," would indeed be a flimsy affair, but it would be far from simple in construction. Mr. Claridge asks for a cheaper and a better idea than his suggestion. The answer is to be found in the photographs on pages 350 and 351 of the B.B.J. I quite agree with the last two lines of Mr. Claridge's article. We do have to "wait and see" a long time for the introduction of modern methods into this country, but once we get them we can often improve on them.

In my opinion, as things are at present, any young man or woman who wishes to give bee-keeping, from a business point of view, a high place in their life's work, has more chance to succeed abroad than in this country. The great advance in bee-keeping in New Zealand, for instance, during the past few years proves this. It is a pity such is the case, as the average price obtainable for English honey in pre-war times was, I believe, double that which the foreign bee-keepers have to be content with. Then there is the question of legislation for bee-keepers raised by Mr. Moore on page 391. While this country is following the policy evidently advocated by Mr. Claridge, viz., "wait and see," the New Zealanders have seen first and waited second in a very effective manner—another reason why it is safer to start an apiary in a country with good bee laws than here, where we have none at all.—ERNEST SIMONS.

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ESTABLISHED 1873.

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THE
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& Bee-Keepers Adviser.
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THE

British Bee Journal

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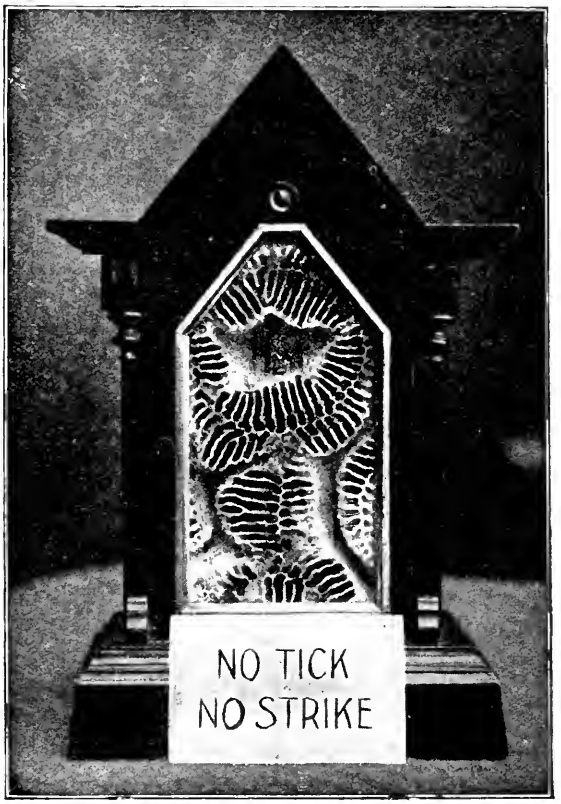

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Edited by T. W. COWAN, F.L.S., &c., and W. HERROD-HEMPSALL, F.E.S.

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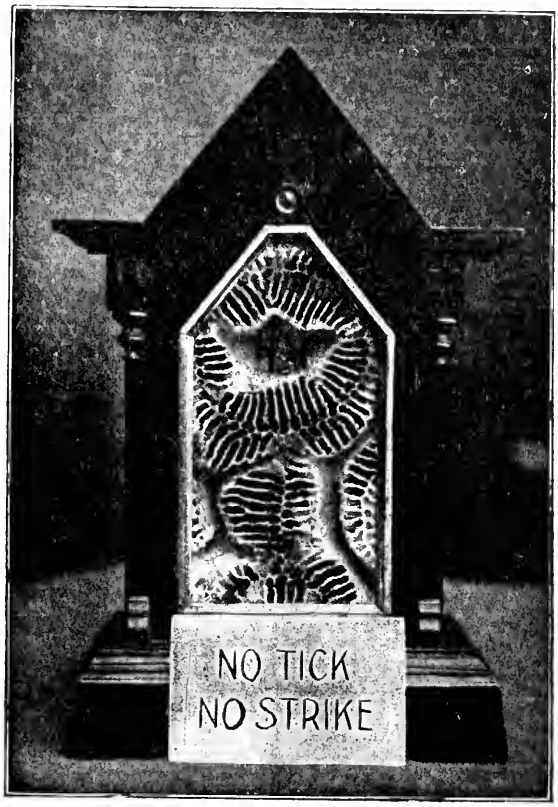

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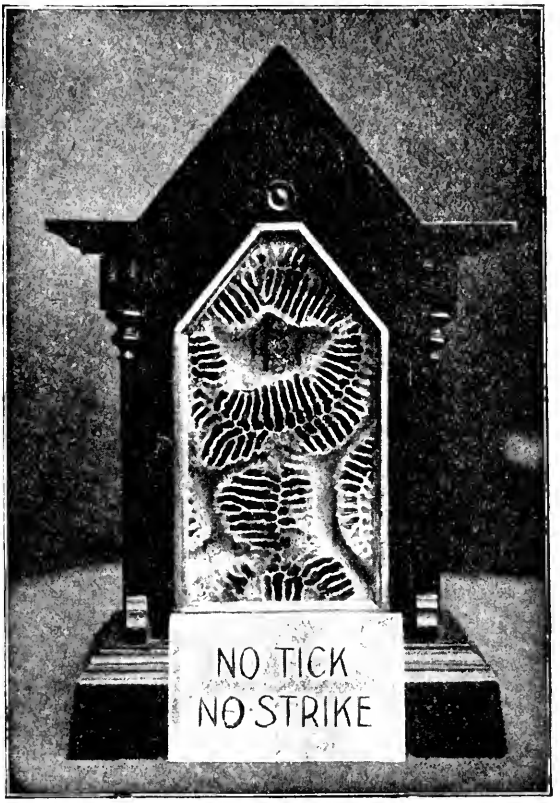

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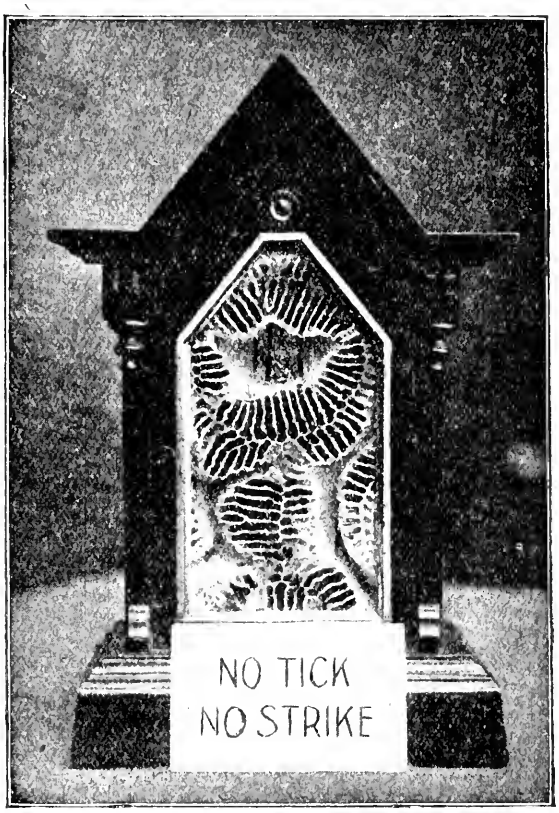

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THE
ESTD 1873
BRITISH BEE JOURNAL
& Bee-Keepers Adviser.
Edited by T.W.Cowan F.L.S. and W.Herrod—Hempsall F.E.S.
A Weekly Journal Devoted to the Interests of Bee-Keepers.
Office 23 Bedford Street Strand London.W.C.

No. 1755. Vol. XLIV. N.S. 1363.] FEBRUARY 10, 1916. [*Published every Thursday, Price* 1*d.*

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E. H. TAYLOR, WELWYN, HERTS.

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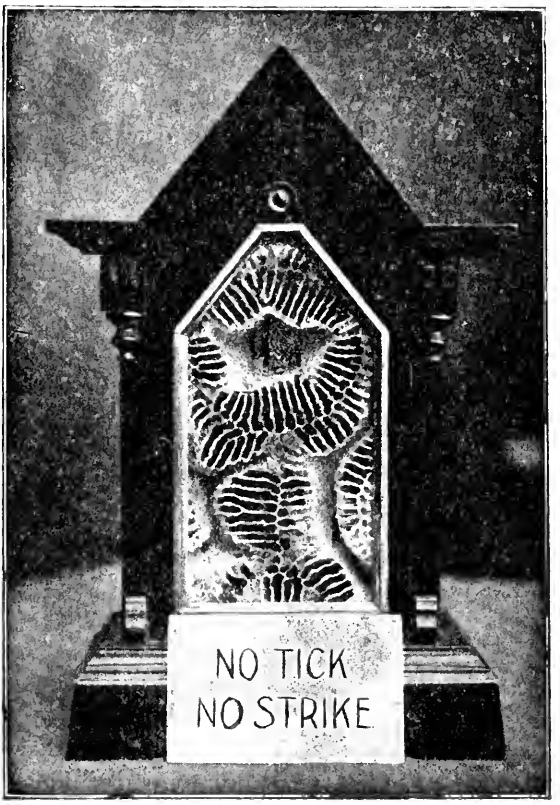

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Edited by T. W. Cowan F.L.S. and W. Herrod-Hempsall F.E.S.
Office: 23 Bedford Street, Strand, London, W.C.
ESTD 1873

No. 1757. Vol. XLIV. N.S. 1365.] FEBRUARY 24, 1916. [*Published every Thursday, Price 1d.*

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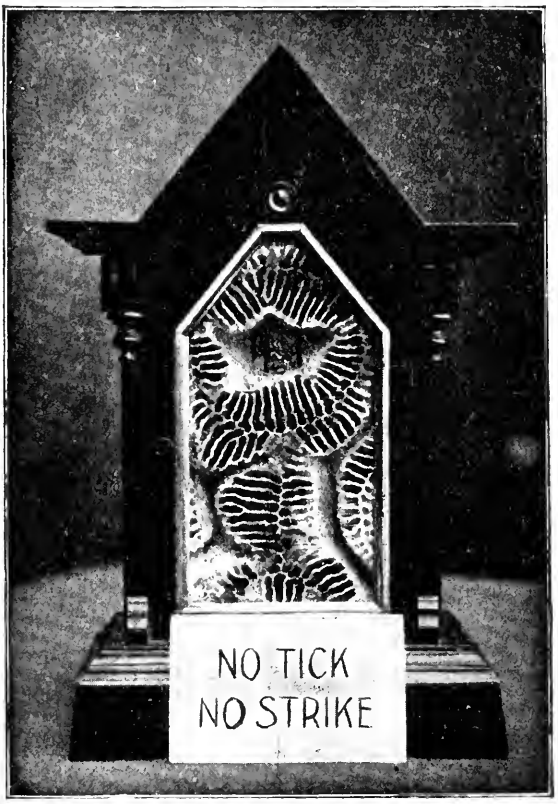

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The
British Bee Journal
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Weekly Journal Devoted to the Interests of Bee-Keepers.
Edited by T.W. Cowan F.L.S. and W. Herrod—Hempsall F.E.S.
Office 23 Bedford Street Strand London. W.C.
Estd 1873

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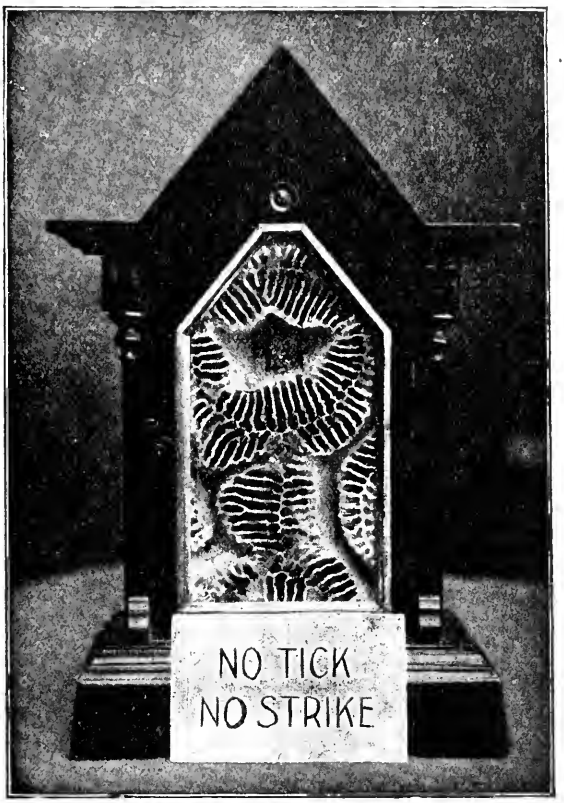

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On £1 order, we will send free, ½lb. Super Foundation.

On £2 order, we will send free, 1lb. Super Foundation and order carriage paid.

On £3 order, we will send free, 1½lbs. Super Foundation and order carriage paid.

On £5 orders, we will send free, 2lbs. Brood and 1lb. Super Foundation and order carriage paid.

Bees, Bottles, and Glass Goods are excepted from the above offer. Net cash 1916 retail catalogue prices must be sent with order.

If the Foundation offered is not required, customers may select other articles of the same value.

1916 General Bee Appliance List Post Free.

JAMES LEE & SON, LTD.,

GEORGE STREET, UXBRIDGE, MIDDLESEX,

BEE FARM: FULBOURNE, CAMBRIDGE.

1913-14-15. I.O.W. CONQUERED—AND—THE RESULT.

Feb., 1914:—"I have lost all my black bees—every stock except those to which I gave your W.S. Queens [one dozen] last Autumn" (1913).

Writing again in March, 1915, the same bee-keeper says:—"I have again brought my bees through in splendid condition through following your instructions." *Aug. 28th*, 1915:—"W.S. strain bees have averaged 140lbs., though a poor season."

A WILTSHIRE BEE-KEEPER.

Full Particulars Free.

S. SIMMINS, QUEENLAND, HEATHFIELD, SUSSEX.

LONDON: PRINTED BY L. UPCOTT GILL & SON, LTD., LONDON AND COUNTY PRINTING WORKS, DRURY LANE, AND PUBLISHED FOR THE PROPRIETOR BY SIMPKIN, MARSHALL, HAMILTON, KENT, AND CO. LIMITED. 31 & 32, PATERNOSTER ROW, E.C.—MARCH 2, 1916.

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TAYLOR'S MAKE OF ENGLISH WEED FOUNDATION

DO NOT LET YOUR BEES STARVE.

USE

TAYLOR'S SOFT CANDY.

Put up in 1lb. and 2lb. boxes with glass tops.

1lb., **8d.,** post 5d.; 6 lbs., **4s.,** post 7d.; 12 lbs., **7s. 6d.,** post 1s. 6d., or carriage paid, 1s.;
6 lb. box, **3s. 6d.,** post 7d.; 28 lbs., **7d.** lb.
Above can be had mixed with Pea Meal, and also medicated at no extra charge.
Medicated Syrup for Autumn and Spring Feeding as per Catalogue.

TAYLOR'S NEW REGISTERED ZINC EXCLUDER
giving 50% freer access to supers
16×16 squares **1/9,** post 5d.
8-ft. sheets **10/-,** post 10d.

TAYLOR'S QUININE REMEDY
For ISLE of WIGHT DISEASE,
Post Free with Instructions 2/6.

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LARGE 88-PAGE CATALOGUE FOR 1916 POST FREE.

E. H. TAYLOR, WELWYN, HERTS.

THE

British Bee Journal

ESTABLISHED 1873.

A Weekly Journal Devoted to the Interests of Bee-keepers.

Edited by T. W. COWAN, F.L.S., &c., and W. HERROD-HEMPSALL, F.E.S.

OFFICE: 23, Bedford-street, Strand, London, W.C.

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Business and literary matters must be *written on separate sheets.*

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do. do. "art" covers	2/6	,,	3d.
The Honey Bee	2/6	,,	3d.
Wax Craft	2/-	,,	2½d.
do. do. cloth gilt	3/-	,,	3d.
Bee-keepers' Practical Note Book	1/-	,,	1d.
Modern Bee-keeping	-/6	,,	1d.
Maeterlinck's Life of the Bee	2/6	,,	2d.
The Lore of the Honey Bee, 1/2 &	6/-	,,	4d.
Bee Master of Warrilow	1/-	,,	2d.
The Bee People	3/6	,,	3d.
Honey and Health	-/6	,,	1d.
Bound Volumes of "B.B.J."	6/-	,,	6d.
Bound Volumes of "Record"	3/-	,,	4d.
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Winning a Living on Four Acres	-/6	,,	1d.
Cheshire's Bees and Bee-keeping, Vol. 1. Scientific	7/6	,,	4d.
Alexander's Writings on Practical Bee-Culture	2/6	,,	2d.
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Mead, and How to Make it	2½d.	,,	
Honey Vinegar	2½d.	,,	
Honey and Its Uses	1½d.	,,	
How I Work My Small Farm	1/1½	,,	
A B C and X Y Z of Bee Culture, (1913 Edition)	9/6	,,	
A Year's Work in an Out-Apiary	2/6	postage	2d.
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The "Townsend" Bee Book	2/6	,,	2d.
Advanced Bee Culture	6/-	,,	4d.
Producing, Preparing, Exhibiting, and Judging Bee Produce, paper covers, 2/2½; cloth, 3/3		post	free.
Snelgrove's Method of Re-queening, 6½d.		,,	
Queen-Rearing in England, paper covers, 1/8; cloth, 2/8, post free.			
A Modern Bee Farm, 5/-; postage 4d.			
My Natural Non-Swarming System, 7d.; postage ½d.			

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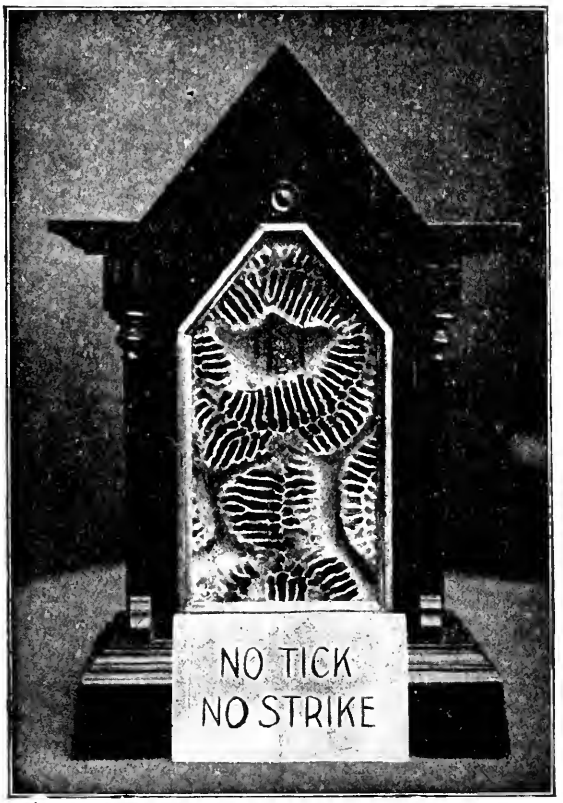
The Childhood of Animals. By Dr. Chalmers Mitchell	10/-	,,	5d.
The Honey Star (Tickner Edwardes)	6/-	,,	4d.
Garden Work: A Practical Manual of School Gardening. By W. Good, F.R.H.S.	3/6	,,	4d

BRITISH BEE JOURNAL & RECORD OFFICE 23, Bedford Street, Strand, London, W.C.

PHOTOGRAPH of Comb in clock-case from which 7 lbs. of Honey was extracted. Seventy pounds were abstracted from the hive also. These Bees were badly affected by "Isle of Wight" Disease and treated by M. C. Pay of Croydon, and cured by IZAL washing, spraying and Izalized food. He had the hive given to him to be destroyed, May 24th, 1912, on which day he began his treatment.

"In IZAL they had placed in their hands a worthy and formidable weapon for battling against the bacillus."—*Sir James Crichton-Browne, F.R.S.*



IZAL is supplied by Royal Warrant to H.M. The King.

2 Teaspoonfuls Izal Fluid to 1 gallon of water for washing and spraying New Queen Bee inserted on June 12th, 1912.

In September 77 lbs. Honey taken from them. At present, June, 1915, descendants of the original diseased bees are quite healthy.

IZAL

is a Reliable Remedy against Foul Brood.

Sold Everywhere in Bottles, **6d.** & **1/-** each.

Ask for full details of IZAL treatment sent post free by

Newton, Chambers & Co., Ltd., Thorncliffe, nr. Sheffield.

ISLE OF WIGHT DISEASE AND IMMUNE BEES.

THE MYSTERY SOLVED.

A great deal of interest has been aroused in the bee-keeping world by Mr. Herbert Mace's art cle in "The British Bee Journal" for 10th Feb., page 45, describing how he obtained a stock of bees, placed it in a diseased hive, gave it diseased combs, and fed it with diseased honey. Twelve months later the stock had been increased to seven, and the bees were still free from disease, although other stocks succumbed.

My attention having been called to the article, I wrote to Mr. Mace on the 12th Feb. :—

"Bures, Suffolk, 12/2/1916.

"Dear Mr. Mace,—I have read with interest your article in 'The British Bee Journal' of Feb. 10th, and am writing to ask if the bees you received on April 14th were the Dutch bees I sent you about that date in 1914. You will remember I sent you a small stock of Dutch bees, asking you to put them to the severest test possible, and that you wrote me on June 17th, 1914, 'There are no traces (I.O.W.) whatever, but of course the real test will come in the autumn.'—Yours faithfully, J. C. BEE MASON."

"Huntingdon, 14/2/1916.

"Dear Mr. Bee Mason,—You have guessed right. The stock mentioned was the one you sent, and I do not think they could have been given a much more severe trial.—Yours very truly, HERBERT MACE."

WHAT FURTHER PROOF IS NECESSARY OF THE WONDERFUL VITALITY AND DISEASE-RESISTING POWERS OF MY DUTCH BEES.

Out of the hundreds of Dutch swarms dispatched from my farms since the "Dutch Invasion" I have only heard of two cases where the bees afterwards suffered badly from I.O.W. disease, and in these two cases it was proved a virgin Dutch queen had mated with an English drone from a diseased stock. I have therefore decided not to sell any more casts or virgin queens in future. All stocks and swarms sent out will be guaranteed free from disease, and headed by young fertile Dutch queens.

As the majority of my 400 stocks of Dutch bees will be worked for honey this season, I shall only have a limited number of stocks and swarms for disposal. Orders received will be executed strictly in rotation.

Stocks on 6 combs	40/-	*Cash with order.*
Nuclei (3 combs)	27 6	
Swarms, 3 lbs.	20-	*See below.*
,, 4 ,,	23/-	
,, 5 ,,	26-/	

Stocks and nuclei will be dispatched as soon after receipt of cash as weather will permit. Payment for swarms need not be made until receipt of invoice a few days before bees are ready to be dispatched.

Address all communications to—

J. C. BEE MASON, Dutch Bee Farms, BURES, SUFFOLK.

TRY IT IN YOUR BATH

BY APPOINTMENT TO H.M. THE KING.

SCRUBB'S CLOUDY AMMONIA

MARVELLOUS PREPARATION

Softens Hard Water. Invaluable for Toilet and Domestic Purposes.
Allays the Irritation caused by Mosquito Bites.

"Cleared the hands of Propolis with wonderful ease."
—D.M.M. in B.B.J., Nov. 18th, 1915.

Of all Chemists, Etc. Price 1s. per Bottle.

SCRUBB & CO., LTD., GUILDFORD STREET, LONDON, S.E.

BOWEN'S NOTED BEE-GOODS. Season 1916.

BRITISH BEE-KEEPERS. To avoid delay and save money, order your Bee-Goods at once.

BOWEN'S DESCRIPTIVE BOOKLET is a fund of practical information. It contains everything necessary to ensure a successful season.

Send a Card for it now and address—

A. H. BOWEN, Bee-Goods Specialist, CHELTENHAM.

LIBERAL DISCOUNT. GOODS BY RETURN.

BUSINESS ADVERTISEMENTS.

WANTED, a few sections of honey.—Dollis Park Dairy, Church End, Finchley.

BULK light English honey required, 7d. per lb., delivered Cardiff, tins returned.—ROWE, 28a, Moy-road, Cardiff.

LIMITED quantity shop-soiled Bee Goods for sale; undoubted bargains; list free.—JOHN DE BURGH LEAKE, Montpelier-hill, Dublin. v 43

SOFT Bee Candy, medicated, plain, or with pea flour, 1lb. glass top boxes, 7½d., postage 5d.; 2lb., 1s. 3d., postage 6d.; reduction for 7lb and over.—Box 999, "B.B.J." Office, 23, Bedford-street, W.C.

COLONIAL HONEY.—LEONARD HALL & CO., 132, Queen Victoria-street, London, honey importers and packers for H.M. War Dept., the leading stores, &c.

COLONIAL and Californian honey, 50s. to 65s. cwt., carriage paid; cash. Sample, 3d.—ROWE, 28a, Moy-road, Cardiff. v 90

COMFORTABLE APARTMENTS for Brother Bee-keepers visiting Douglas. Terms: Tea, bed, and breakfast, 3s. 6d.; or full board, 5s. per day.—HORSLEY'S, Merridale House, top of Castle Drive, Douglas, Isle of Man.

EGGS for hatching and day old chicks, from noted strains, for winter laying; eggs, 5s., 7s. 6d. dozen; chicks, 8s. 6d. and 10s. 6d. dozen; free catalogue on application.—DOLLIS PARK POULTRY FARM, Church End, Finchley, N.

ROWE,
28a, Moy Road, CARDIFF,
SELLS Pure Honeys, Colonial and Californian, &c., 50s. to 60s. and 60s. to 68s. cwt. carriage paid, tins free; cash. Samples 3d. BUYS Home-produced Run Honey, Sections, and Beeswax.

IN WAR-TIME

The Nation's Food is of prime importance. The products of the Apiary, of Poultry and Farm Stock, of the Fruit and Vegetable Garden can be augmented. Buy your stock, sell the produce, through

THE BAZAAR, EXCHANGE & MART
Newspaper.

Get a Copy—Thursday, 2d.; Saturday, 1d.

The "Bazaar" publishes also practical handbooks by experts. Send for full catalogue, ——post free from——

WINDSOR HOUSE, Breams Buildings, LONDON, E.C.

THE
British Bee-Keepers' Association.

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SAVE MONEY this winter by making up your own hives. Particulars of wood cut ready to make up into hives will be sent free on receipt of a post card.

E. J. BURTT, Manufacturer, Gloucester.

R. STEELE & BRODIE'S FAMOUS BEE CANDY.

Insure your bees against starvation by putting on a cake of our famous bee candy. Quality is PERFECTION. Put up in wooden boxes with glass cover.

Guarantee. DADANT'S WEED FOUNDATION is guaranteed free from all disease germs. Every sheet is PERFECT, and bees never refuse it.

Our HIVES and APPLIANCES are CLASS "A," securing SEVEN FIRST PRIZES at the Highland Agricultural Society's Shows at Paisley and Hawick.

Read the American Bee Journal, the finest bee paper in the world. A free book, "First Lessons in Bee-keeping," or "Doolittle's Queen-Rearing" given free with yearly subscription, 5/6, post free.

Send for our large illustrated catalogue, in which you will find particulars of our SPECIAL DISCOUNT OFFER, for orders received before the 31st March.

R. STEELE & BRODIE, WORMIT WORKS, Wormit, SCOTLAND.

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IN ONE AND TWO-POUND BOXES WITH GLASS TOPS.

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PLAIN and MEDICATED, SAME PRICE.
MEDICATED WITH QUININE ½d. per lb. EXTRA.

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ESTD 1873

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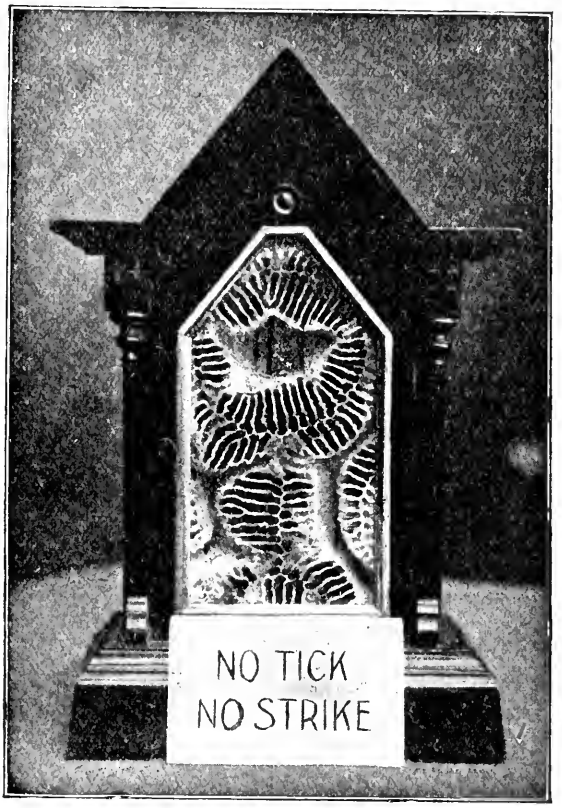

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Edited by T. W. Cowan F.L.S. and W. Herrod—Hempsall F.E.S.
A Weekly Journal Devoted to the Interests of Bee-Keepers.
Office: 23 Bedford Street, Strand, London, W.C.
ESTD 1873

No. 1761. Vol. XLIV. N.S. 1369.] MARCH 23, 1916. [Published every Thursday, Price 1d.

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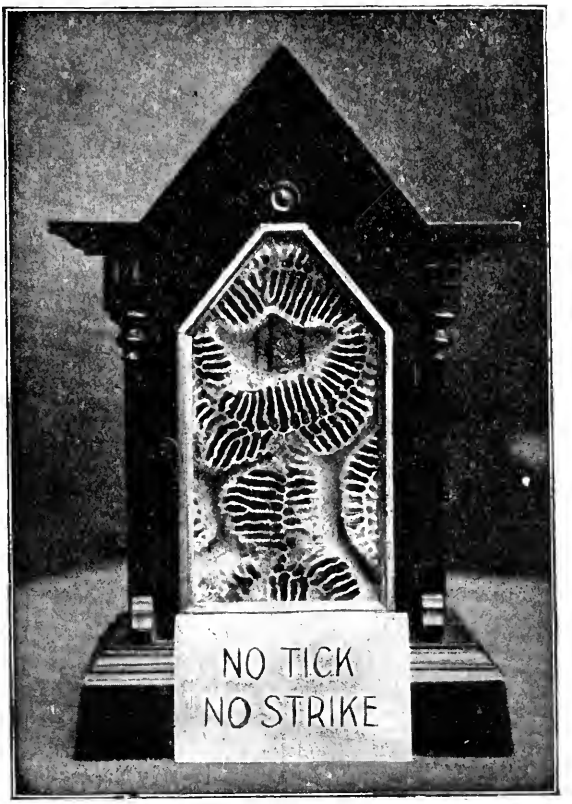

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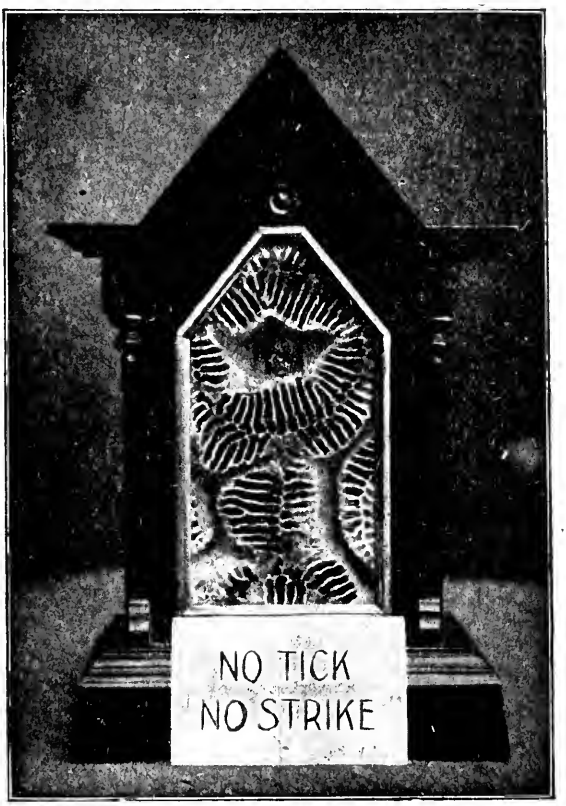

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THE BRITISH BEE JOURNAL & Bee-Keepers Adviser.

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Edited by T.W.Cowan F.L.S. and W.Herrod—Hempsall F.E.S.

A Weekly Journal Devoted to the Interests of Bee-Keepers.

Office 23 Bedford Street, Strand, London, W.C.

No. 1763. Vol. XLIV. N.S. 1371.] APRIL 6, 1916. [*Published every Thursday, Price 1d.*

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THE

British Bee Journal

ESTABLISHED 1873.

A Weekly Journal Devoted to the Interests of Bee-keepers.

Edited by T. W. COWAN, F.L.S., &c., and W. HERROD-HEMPSALL, F.E.S.

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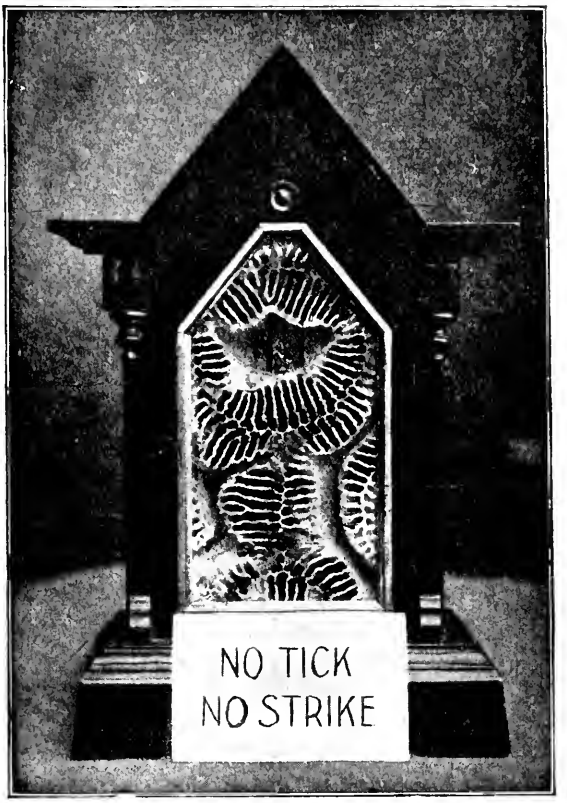

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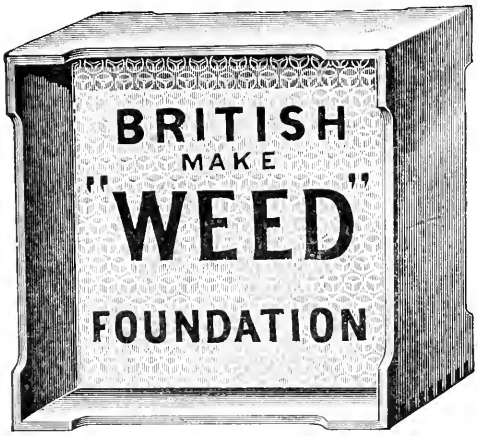

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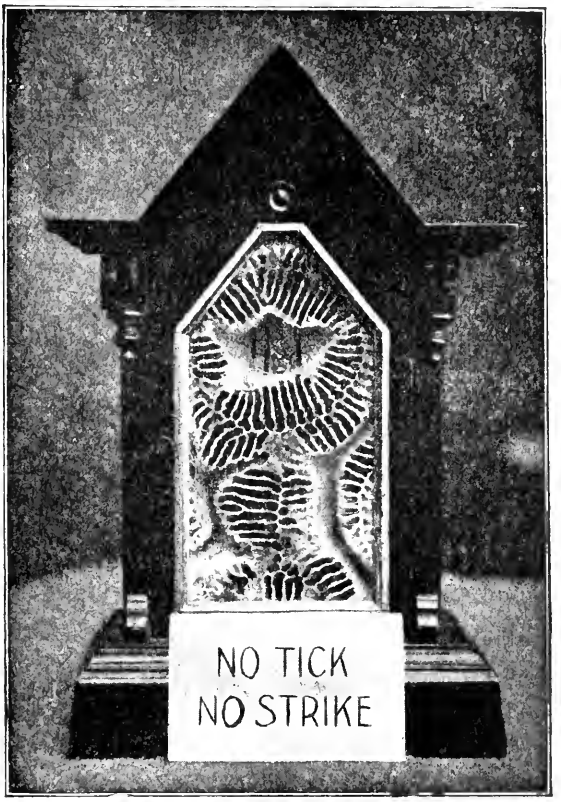

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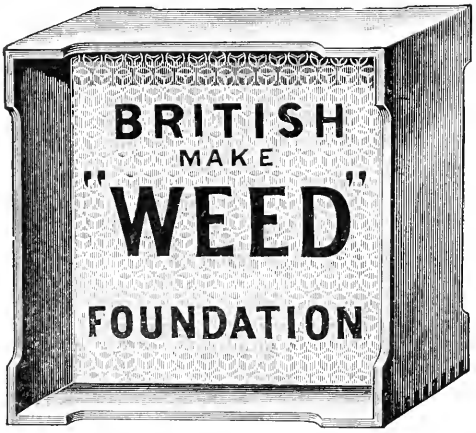

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Edited by T. W. Cowan, F.L.S. and W. Herrod-Hempsall, F.E.S.

A Weekly Journal Devoted to the Interests of Bee-Keepers.

Office 23 Bedford Street, Strand, London, W.C.

ESTD 1873

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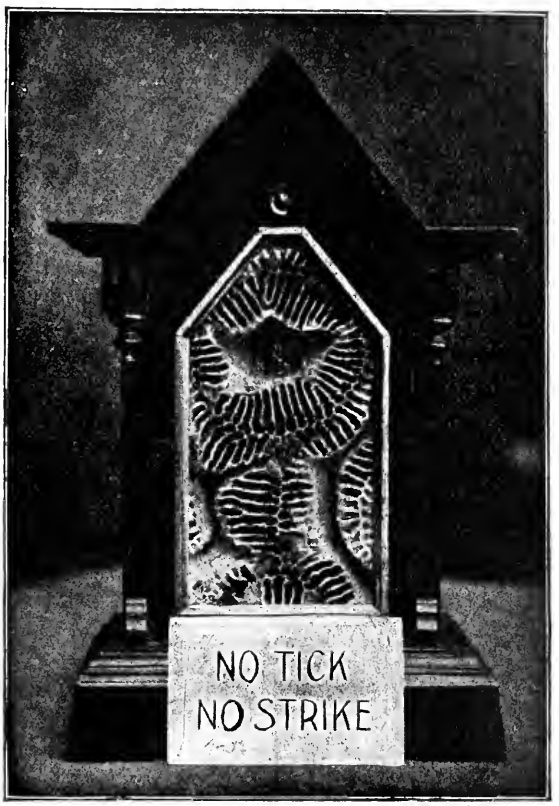

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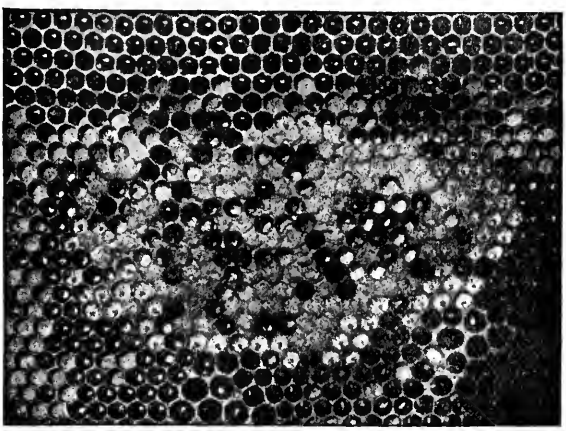

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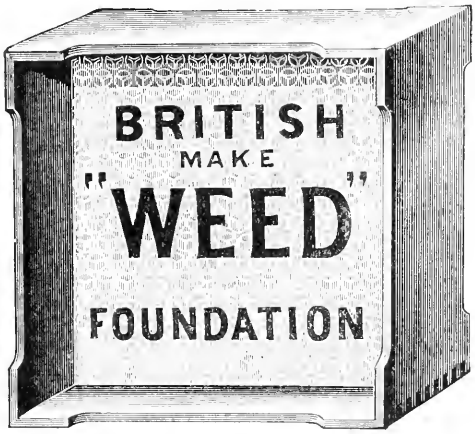

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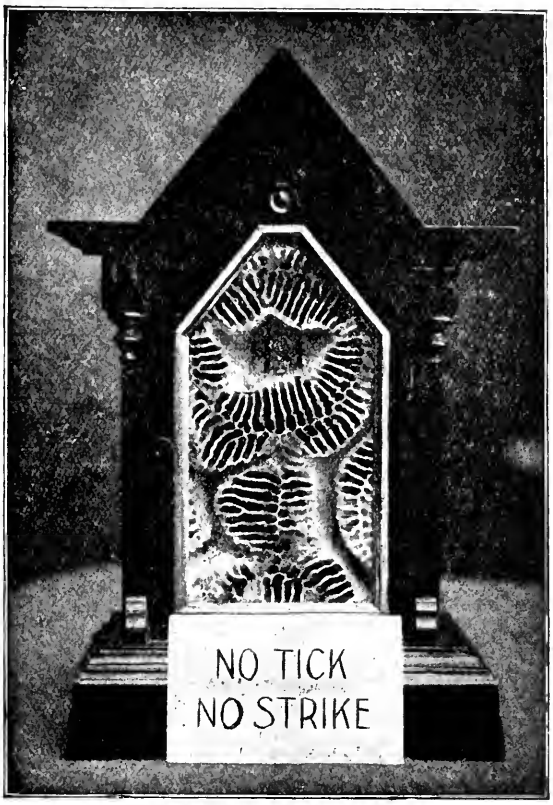

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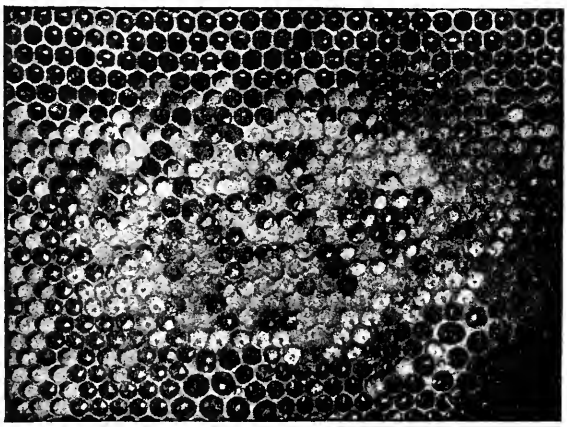

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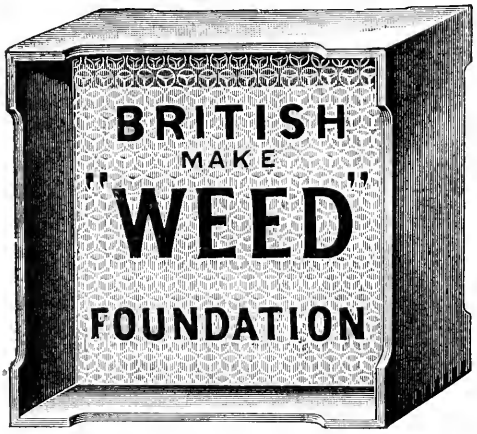

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ESTD 1873

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In order to save trouble, it is requested that the Rules be carefully read over by persons using the Deposit System of trading.

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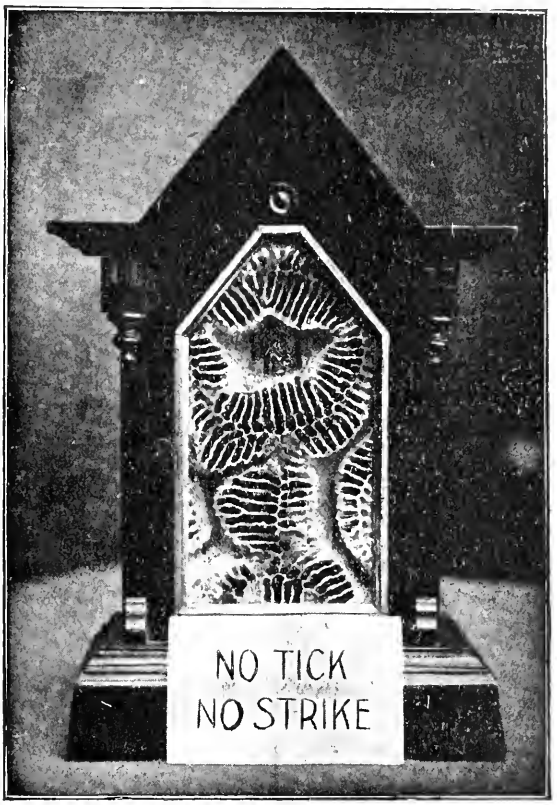

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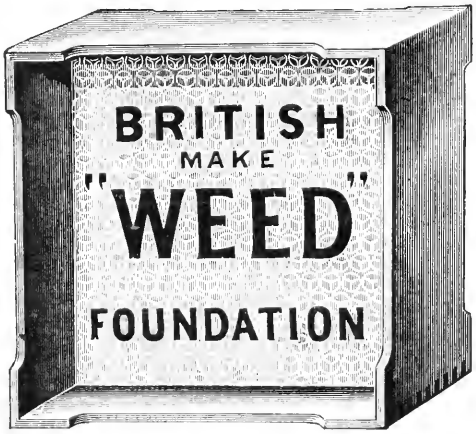

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& Bee-Keepers Adviser.
a Weekly Journal Devoted to the Interests of Bee-Keepers.
Edited by T. W. Cowan F.L.S. and W. Herrod—Hempsall F.E.S.
Office—23 Bedford Street, Strand, London, W.C.
ESTD 1873

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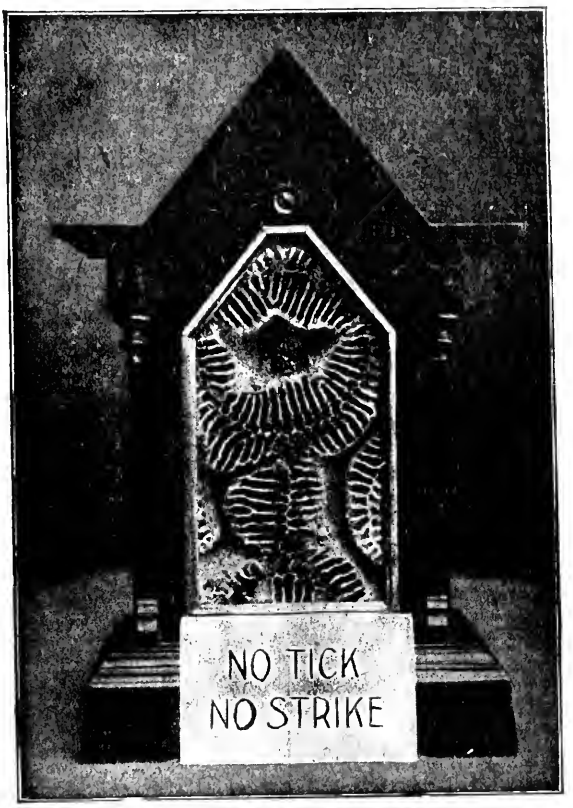

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Class 9.—Six Jars of Granulated Honey of any year. First Prize, 7s. 6d.; Second Prize, 5s.; Third Prize, 2s. 6d.

Class 10.—Beeswax, in one cake to approximate 1lb. First Prize, 7s. 6d.; Second Prize, 5s.; Third Prize, 2s. 6d.

Class 11.—Twelve Sections of Comb Honey, excluding Heather Honey, of any year, approximate weight 12lb. First prize, 15s.; Second Prize, 10s.; Third Prize, 5s.

Class 12.—Twelve Jars of Run or Extracted Light-coloured Honey of any year, gross weight to approximate 12lb. First Prize, 15s.; Second Prize, 10s.; Third Prize, 5s.

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Duplicate Prizes corresponding to the foregoing will be offered in the group of counties named below, and numbered 15 to 18.

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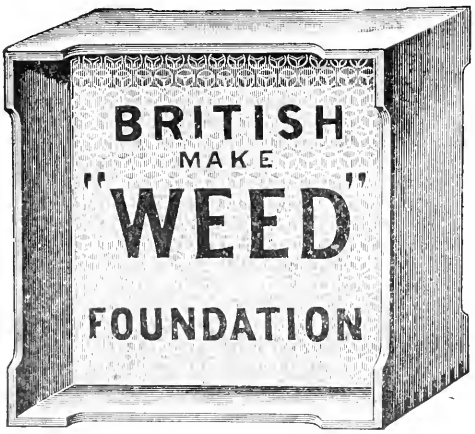

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ESTD 1873
BRITISH BEE JOURNAL
& Bee-Keepers Adviser.
Edited by T.W.Cowan, F.L.S. and W.Herrod—Hempsall, F.E.S.
A Weekly Journal Devoted to the Interests of Bee-Keepers.
Office 23 Bedford Street, Strand, London, W.C.

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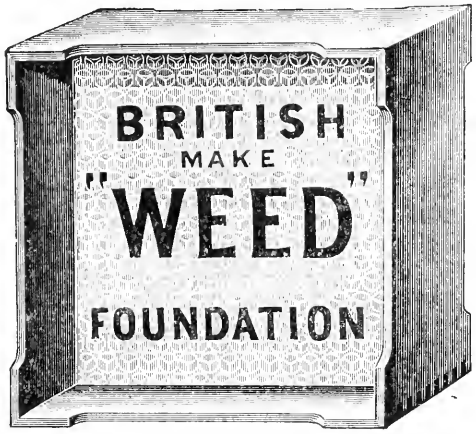

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EST. 1873

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THE

British Bee Journal

ESTABLISHED 1873.

A Weekly Journal Devoted to the Interests of Bee-keepers.

Edited by T. W. COWAN, F.L.S., &c., and W. HERROD-HEMPSALL, F.E.S.

OFFICE: 23, Bedford-street, Strand, London, W.C.

Correspondence: Whom to Address —All matters relating to the Literary Department, Associations, Shows, &c., should be addressed, "Editors, *British Bee Journal*," and all business communications and matters relating to subscriptions and advertisements to be addressed to the "Manager," *B.B.J.* Office.

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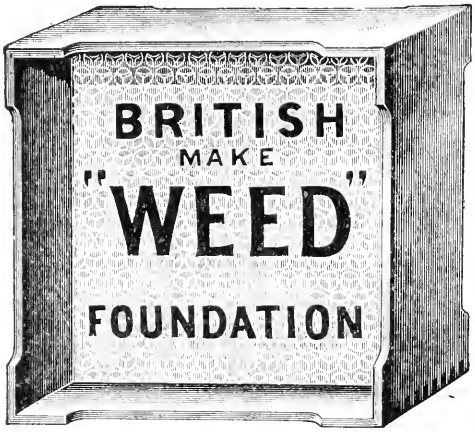

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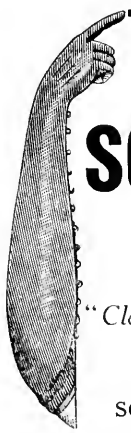

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THE

British Bee Journal

ESTABLISHED 1873.

A Weekly Journal Devoted to the Interests of Bee-keepers.

Edited by T. W. COWAN, F.L.S., &c., and W. HERROD-HEMPSALL, F.E.S.

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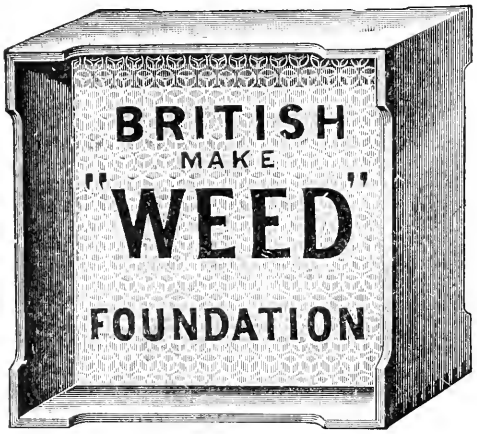

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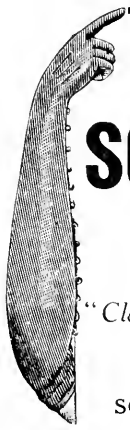

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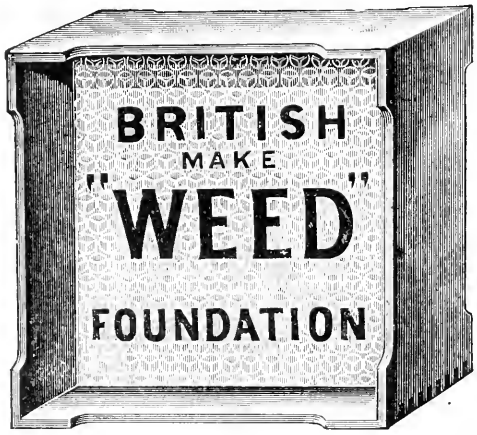

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BRITISH BEE JOURNAL
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A Weekly Journal Devoted to the Interests of Bee-Keepers.
Edited by T.W.Cowan F.L.S. and W.Herrod—Hempsall F.E.S.
Office—23 Bedford Street, Strand, London, W.C.

No. 1774. Vol. XLIV. N.S. 1382.] JUNE 22, 1916. [*Published every Thursday, Price 1d.*

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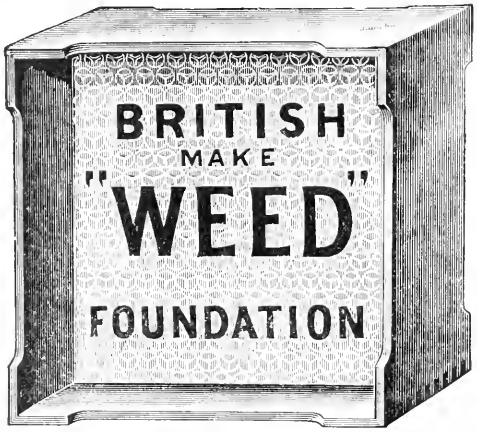

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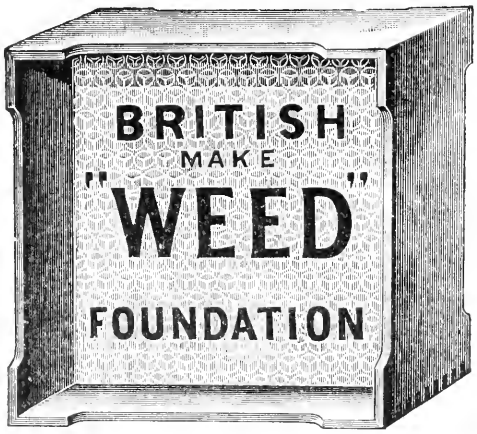

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Allays the Irritation caused by Mosquito Bites.

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NUCLEI, four frames, 18s. In 1914 I purchased three White Star queens and my bees have not since been attacked with "Isle of Wight" disease, although practically all in district have gone under. Box 3s., or return.—A. A. L. SKINNER, Tomato Houses, Mickleover, Derby.

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British Bee-Keepers' Association.

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ISLE OF WIGHT DISEASE.

ITS SUCCESSFUL, SIMPLE, AND INEXPENSIVE CURE.

Vouched for by many well-known Bee-keepers after thorough tests on the most hopeless cases.

When bee-keepers, in the Isle of Wight, in the year 1906 were confronted by an epidemic devastating their stocks, the matter was brought to the notice of the Board of Agriculture, whose experts investigated the nature of the outbreak, and reported as to its deadly character. Two years after, most of the original island stocks had perished. Since then, the disease has spread throughout the United Kingdom notwithstanding all efforts to stamp it out.

The Board of Agriculture in 1911 conducted the most thorough investigation into the cause and nature of this terrible scourge, but so far has found no satisfactory cure. Nevertheless, their microscopic examinations and research have elicited many very important facts relating to the development of the disease within the body of the bee.

Although the outbreak of the disease in its most virulent form, in the Isle of Wight, drew attention to the seriousness of the visitation a study of the records relating to the disease of adult bees has shown that several outbreaks closely resembling the epidemic under investigation have been described in various times in this country during the last two centuries. These outbreaks have varied in severity, duration and distribution every summer, causing immense losses of bees throughout the country, the magnitude of which can only be realised by bee-keepers. On the Continent, similar epidemics have been recorded from time to time.

Drs. Fantham and Porter showed by their observations and infection experiments that *Nosema apis* was capable of producing the fatal disease, the symptoms of which are, unfortunately, only too well known to bee-keepers whose stocks have been annihilated during the past few years.

The description of the life history of *Nosema apis* in the intestines and tissues of diseased bees is necessarily of a highly technical character. It is sufficient to state here that the parasites, after being taken into the alimentary canal as spores, usually enter the cells, lining the chyle stomach, and multiply enormously. The parasites, in their early stages alone, are sufficient to kill the bees in most cases. When the life-circle is completed, the parasites develop into resistant spores which pass out of the cells and are voided in the excrement. The disease is highly infectious, and moisture, rainwater, and ponds contaminated with infected excrement are a potent source of infection.

Bees, in the early spring, are weaker after their hibernation than they are in the summer; consequently if they have harboured *Nosema apis* intestinally during the winter, or acquire it very soon after their awakening, the parasite may be expected to get the upper hand and an outbreak of disease results.

Recognising the highly important discoveries referred to in the booklet issued by the Board of Agriculture, particularly the frailty of the young form of the parasite, and being much impressed by the claims of a non-poisonous bactericide called "Bacterol," which was introduced to the medical profession here from Italy, where it is so successfully used by the Senior Physicians to the King of Italy downwards, Mr. E. A. Glen, of Chingford, obtained samples from the manufacturers and mixed a very small percentage with honey. A drop was placed on the tip of the finger. Two diseased bees (crawlers) were then enticed to partake of the mixture which, to his astonishment, they gradually sucked until satisfied. A number of small experiments were made during the next few days and the improvement in bees suffering from the disease was most marked. In the interval, one of his stocks had to be destroyed, but what remained of another—a handful of bees—was, on the 20th April, given some syrup medicated with Bacterol, all stores of honey, as far as possible, having been removed.

The results are related in the following most interesting series of reports :—

COPIES OF REPORTS ON THE SUCCESSFUL TREATMENT OF

THE ISLE OF WIGHT DISEASE OF BEES

WITH BACTEROL (GENERAL).

MESSRS. BACTEROL, LTD.,
HIGHGATE,
LONDON, N.

CHINGFORD,
May, 1, 1916.

DEAR SIRS,

I have now had time to note the results of the treatment of one of my stocks of bees with "Bacterol" (General), a sample of which you so kindly gave me to experiment with in the endeavour to rescue the bees from the ravages of the disease known as the "Isle of Wight" plague, or Microsporodiosis.

Of my five stocks, two were observed about a month ago to be badly affected, the bees crawling about in front of the hives on the ground in hundreds, until in less than a fortnight I had to destroy one weak stock, especially as the report received from the Board of Agriculture notified that the disease was of a very virulent type. The other diseased stock lingered on until I had an opportunity to examine the bees, which I found were only covering three combs, two of which contained brood. Removing all the outside honey-combs, I placed on the top of the frames the usual feeder containing a pint of warm sugar syrup medicated with a strong proportion of your "Bacterol" (General)—viz, 1 *small* teaspoonful to the pint of syrup, or (as near as I have since ascertained) 1 part to 200 of syrup. The syrup was given to them on Good Friday at 10 a.m. Within four hours, large numbers of flying and crawling bees were noticed evacuating greenish-brown fæces on the alighting board, on the roof of the hive, and on the surrounding ground. Very few of the bees were ultimately observed unable to fly, which fact I took to be a good sign of the treatment. As later that afternoon I had to depart on a journey to Yorkshire, I asked a neighbour bee-keeper (who lost his two hives from the "Isle of Wight" disease in the winter) to keep observation on the further effects of the treatment during the following days. He reported that on the Saturday no more than a dozen crawlers were observed; on the Sunday only a few; on the Monday a few; on Tuesday two or three: and on the Wednesday (a fine warm day) I could not find more than a couple of young bees On these days, as far as weather permitted, the remaining bees in this hive were foraging as usual, although it appeared that they were somewhat heavy on the wing. During this week-end just past (Saturday and Sunday) no crawlers were seen, and I am delighted to say the bees are strong on the wing. I should mention that the bees took down the pint of syrup during the Friday night, and did not seem to object to the drug.

Careful examination of the brood in all stages of development showed that they were not killed by the treatment, and to all appearance the administration of "Bacterol" has effected what I can only term a marvellous cure, knowing as I do from past experience the futility of attempting a remedy by other so-called "cures." Of course, one cannot yet be certain of the permanent effects of the "Bacterol" treatment, but from the apparent transformation of a badly diseased and hopeless stock to one of strong vitality, I place great confidence in your bactericide.

I will write you further in the course of a month or six weeks, when the stock would arrive at full strength. In the meantime, I have recommended the further extensive trial of "Bacterol" to a large firm of bee-keepers.

Yours faithfully,

E. A. GLEN.

[COPY.]

MESSRS. BACTEROL, LTD.,
HIGHGATE, N.

CHINGFORD.
June 1, 1916.

DEAR SIRS,

Bee Disease. (*Nosema Apis.*)

I duly received your favour of the 19th ult., and noted contents. It will be interesting to hear the results obtained by other bee-keepers from the "Bacterol" treatment.

I am pleased to say that the bees in the hive treated on 21st April, also on 15th May, are now quite free from the disease. I found it necessary to give them the second dose of "Bacterol" in syrup on the latter date because one or two crawlers were noticed; since then there have not been any further signs, and they appear now to be recovering strength, though not so rapidly as one would wish or expect—probably because of the age of the queen. I will take the first opportunity to re-queen the hive, and will report later.

I should state that the second dose did not produce the same effect of the greenish evacuations on the alighting-board, &c.: in fact, there was hardly any soiling, thereby proving, I think, that there was no infection of the chyle stomach then.

I forget whether in my previous letter I stated that before giving the infected bees the first dose I had removed almost all their stores of honey. This I consider a *sine qua non* in the treatment.

Yours faithfully,

E. A. GLEN.

[COPY.]

MESSRS. BACTEROL, LTD.,
HIGHGATE, N.

CHINGFORD.
July 21, 1916.

DEAR SIRS,

Replying to your letter of yesterday's date, I duly received the sterilised standard frame, which I at once placed in the hive which early in Spring had almost been annihilated by "Isle of Wight" Bee Disease, but which now is nearly at full strength.

I am *very* pleased to state that there has not been any recurrence of the disease since the treatment of this hive with "Bacterol" in April, and that all the other hives are quite free from any signs of the disease. During this week-end I intend to make a thorough examination of the hives referred to, and will write you further on Monday or Tuesday.

Yours faithfully,

E. A. GLEN.

REPORTS ON ISLE OF WIGHT DISEASE (Continued).

[COPY.]

CHINGFORD.
July 21, 1915.

MESSRS. BACTEROL, LTD.
HIGHGATE, N.

DEAR SIRS,

Yesterday I made an examination of the stock of bees, as promised, and found seven of the ten combs crowded with brood and eggs; one-half of one side of a comb contained drone brood; there was no sign of "Isle of Wight" Disease; and as the whole of the ten combs were fully covered by bees, I have decided to place a rack of sections on and remove the stock to Loughton for the heather honey crop next week. The queen bee appears to have quite regained her egg-laying power, which for a long time, owing probably to the after-effects of the disease, she appeared to have lost.

Having regard to the marvellous transformation of this stock from a miserable handful of bees at the end of April (owing to the ravages of the "Isle of Wight" Disease) to its present state of prosperity, resulting from two doses of "Bacterol" (General), I am firmly of opinion that a sure cure for the disease has *at last* been discovered, to which conclusion other bee-keepers, who have tested your bactericide, have also arrived.

Yours faithfully,
E. A. GLEN.

[COPY.]

CHINGFORD.
August 8, 1916.

DEAR SIRS,

To-day I have taken off 21 full sections from the cured hive.

Yours faithfully,
E. A. GLEN

HUNDREDS OF OTHER SUCCESSFUL REPORTS HAVE ALREADY BEEN RECEIVED FROM WHICH THE FOLLOWING ARE TAKEN.

August 8, 1916.

"You remember, of course, the strong evidence of 'Isle of Wight' disease which confronted you on your visit to my bees the other week; I am pleased to say that as a result of using the Bacterol you so kindly and promptly supplied, there is now no trace of any crawlers; even round those hives where masses of affected bees lay in heaving heaps there is not one to be seen.

"The quickness of the disappearance is really marvellous, and should the permanency of the cure equal its apparent completeness, the treatment would certainly have proved itself *the* long-looked for friend in need."

July 20, 1916.

"We have to thank you for your letter of the 19th inst., as regards the use of Bacterol General as a cure for I.O.W. Bee Disease. I can only say that it certainly has cured several stocks which were badly affected with the trouble in the early part of the bee season. The stocks treated have made splendid headway, and are now in first class condition."

July 29, 1916.

"On July 1st I received from you the Bacterol for my bees. The two hives were at the last gasp, nearly all the bees crawling on the ground. I at once gave some syrup containing one teaspoonful of the Bacterol to them, which they took readily. To-day not a bee is crawling, and each stock is working vigorously and bringing in honey. I believe they are *quite cured*, but I shall continue to put a teaspoonful of the syrup at the entrance of the hives now and again. I notice the laden bees take a sip sometimes before going into the hives.

"I thought you might like to hear the result. I myself am so delighted. I have kept bees now thirty years successfully, but the last five years could not keep them alive anyhow."

DIRECTIONS FOR USING 'BACTEROL' (GENERAL).

Medicate each pint of Syrup with 1 teaspoon of Bacterol (General). Stir in when syrup is just warm or cold.

ALTERNATIVE METHOD during hot months.—Spray two or three times daily all crawlers on alighting board and in front of hive with a solution of 1 tablespoon of Bacterol (General) to 1 quart of water. Use a sprayer obtainable from any bee appliance manufacturer—not an ordinary syringe.

A 5 per cent. solution sprayed over the hives will disinfect any excreta and destroy all germs and parasites

All forms of "Bacterol" are Non-Poisonous, Non-Corrosive, Non-Caustic and Non-Sticky. They make clear solutions and are entirely free from objectionable odours, and possess many advantages over every other antiseptic and disinfectant.

BACTEROL (Veterinary) is used for the general disinfection of animals and wounds, for bathing sores, to help their drying and to speedily accomplish their healing by stimulating granulation and the re-formation of cells. "Bacterol" prevents the reproduction of pus, and will be found invaluable for combating all animal diseases such as Foot and Mouth Disease, Cattle Typhoid, Carbuncle Affections, Glanders, Pox, Consumption, Chicken and Hog Cholera, all Skin Diseases, Mange, Scurf, Abortion, &c.

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Above are obtainable from same dealers as Bacterol (General).

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The price at which Bacterol is sold places it within the reach of the humblest cottager, and the gratitude of Bee-keepers of both sexes flows into our office by every post.

Reports from all parts of the country speak of the appalling losses suffered this year in particular by Bee-keepers through Isle of Wight disease. Autumn is near, when so many fatalities occur, but you can

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ISLE OF WIGHT BEE DISEASE.

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2/9 per Bottle, Post Free.

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THE BRITISH BEE JOURNAL & Bee-Keepers Adviser.

ESTD 1873

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No. 1783. Vol. XLIV. N.S. 1391.] AUGUST 24, 1916. [*Published every Thursday, Price 1d.*

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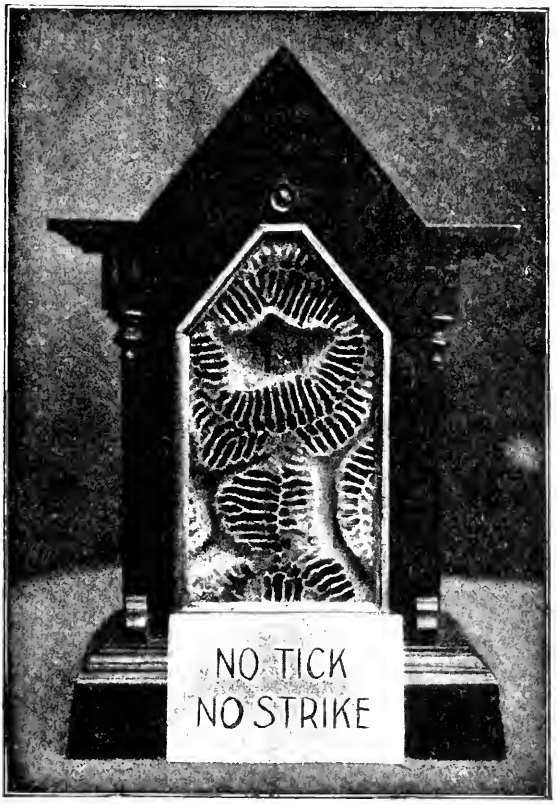

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August 8, 1916.

"To-day I have taken off 21 full sections from the cured hive."

August 8, 1916.

"You remember, of course, the strong evidence of 'Isle of Wight' disease which confronted you on your visit to my bees the other week; I am pleased to say that as a result of using the Bacterol you so kindly and promptly supplied, there is now no trace of any crawlers; even round those hives where masses of affected bees lay in heaving heaps there is not one to be seen. The quickness of the disappearance is really marvellous."

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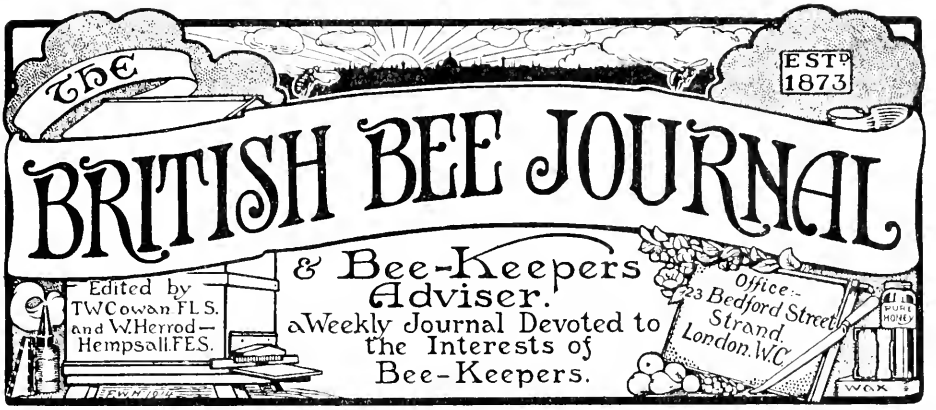

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EST^D 1873

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ESTD 1873

Edited by T.W.Cowan, F.L.S. and W.Herrod—Hempsall, F.E.S.

A Weekly Journal Devoted to the Interests of Bee-Keepers.

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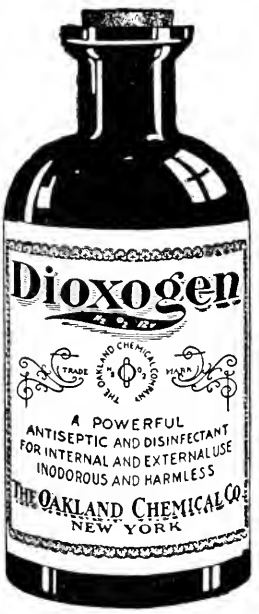

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(Rev. A. H. HOLLIS. *July 20th, 1916.*)

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Warning! Beware of ordinary Peroxide of Hydrogen; it is acid in reaction and usually carries a preservative agent "Acetanilid" to cover its impurities. Without "Acetanilid" ordinary Peroxide will not keep. "Dioxogen" requires and contains no acetanilid. "Dioxogen" is always the same PURE, UNIFORM IN STRENGTH AND QUALITY, being known as the "*Kind that Keeps.*"

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Mr. C. L. N. Pearson, whose experience is here given, is one of those who knows a good thing when he sees it, and has brought to bear upon the subject of the "I.O.W." disease that strong personal initiative (in connection with the methods that S. Simmins advises) that has carried him forward from one genuine success to another. This is his experience as set forth in successive interesting reports:

"July 9, 1913.—I should like to introduce your fine White Stars to all my hives, but in view of so much disease about I don't feel justified in doing so." [Yet the result presently shown by the introduction of a dozen W.S. queens would certainly appear to have justified such a procedure.—S.S.]

"I have had wonderful success with your Conqueror and 'Modern Bee Farm' methods of management. Two hives with common queens have each given 120lbs. of honey so far, and several, 90lbs."

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During the autumn of 1913 Mr. Pearson made up his mind to insert some dozen "White Star" queens, and during February, 1914, he wrote saying, "*I have lost all my black bees—every stock, except those to which I gave your W.S. queens.*" Now we see what a profitable investment it would have been if *all* the stocks had been renovated by W.S. queens. In April, 1915, he again writes, "I have saved all my bees (now W.S.) through following your directions."

"August 28, 1915.—This has been a very poor season, only five weeks real honey gathering, but W.S. strain have *averaged* 140lbs." We have seen the increasing success attained by this painstaking bee-keeper, first by adopting improved methods in securing larger yields with less trouble, and then we see by practical results how disease was overcome while even heavier yields of honey were obtained.

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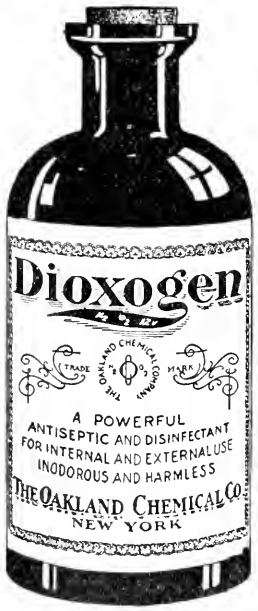

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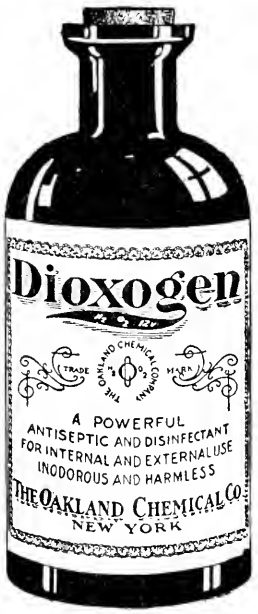

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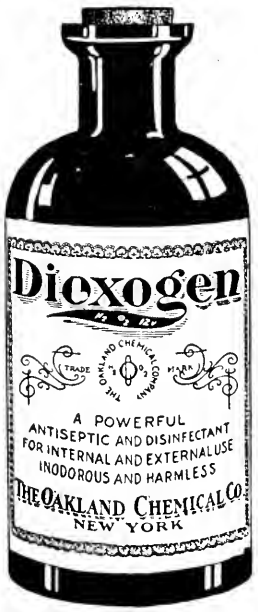

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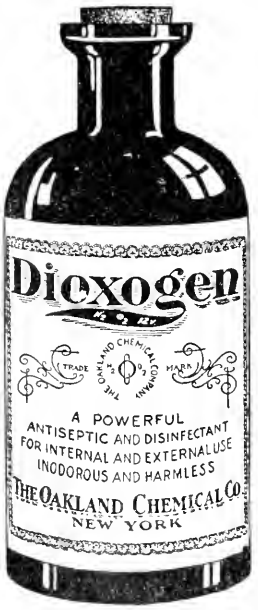

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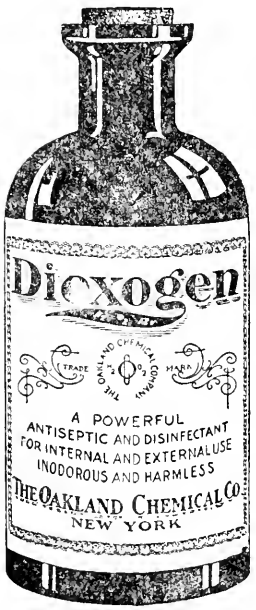

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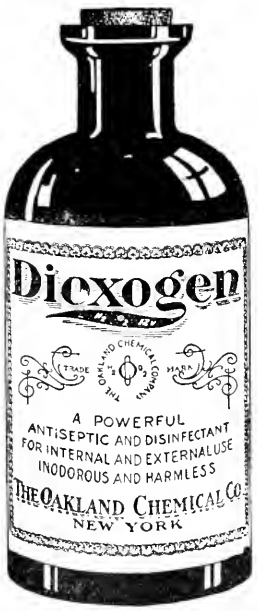

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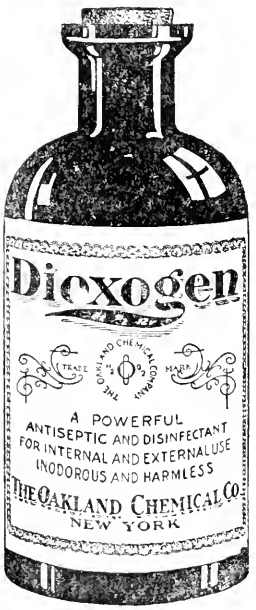

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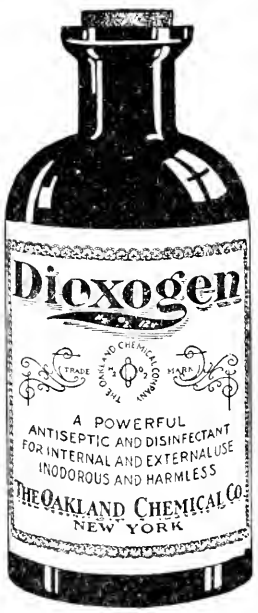

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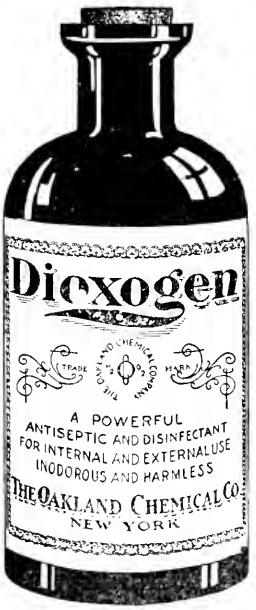

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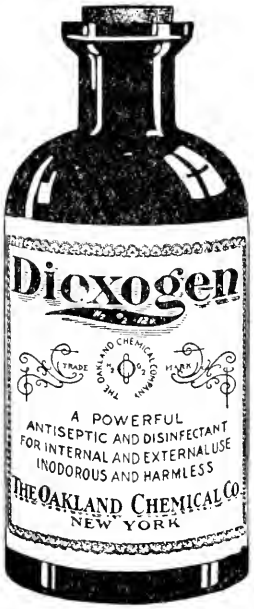

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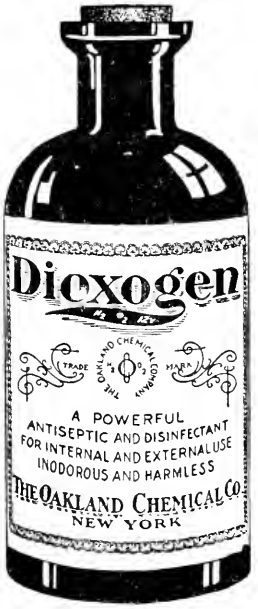

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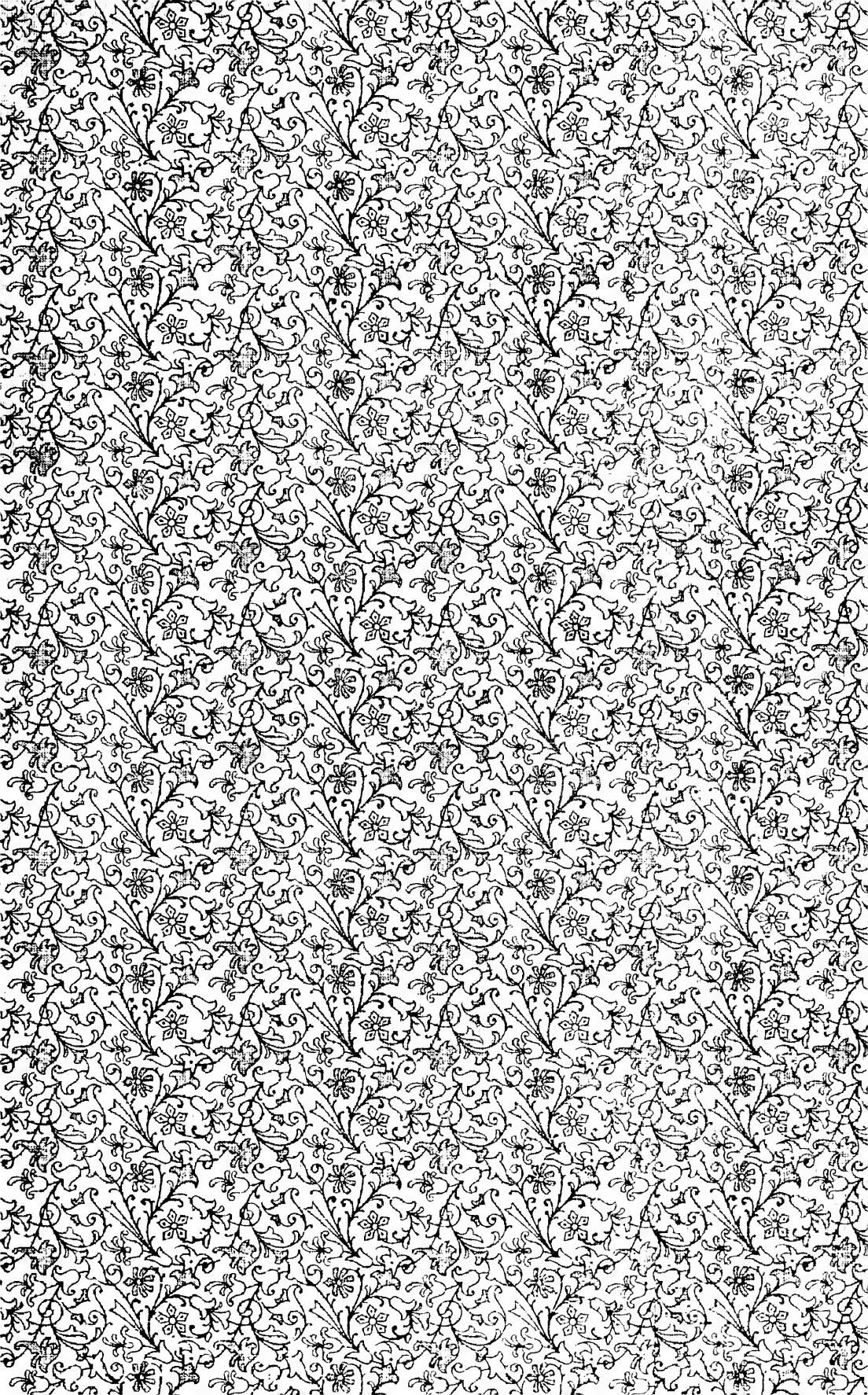
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